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United States

*Vol 2305*

# Circuit Court of Appeals

For the Ninth Circuit.

RUDOLPH LENSCH and PAUL LEDER,  
Appellants,  
vs.

METALLIZING COMPANY OF AMERICA, a  
corporation, L. E. KUNKLER, CHARLES  
BOYDEN and JOSEPH GOSSNER,  
Appellees.

## Transcript of Record

In Two Volumes

VOLUME I


Pages 1 to 428

*Vol 2 missing*

Upon Appeal from the District Court of the  
United States for the Southern District  
of California, Central Division.

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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in *italic*; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in *italic* the two words between which the omission seems to occur.]

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District Court of the United States for the Southern  
District of California, Central Division

No. 201-J Civil

RUDOLPH LENSCH and PAUL LEDER,  
Plaintiffs,

vs.

METALLIZING COMPANY OF AMERICA, a  
corporation, L. E. KUNKLER, CHARLES  
BOYDEN, JOSEPH GOSSNER, DOE COM-  
PANY, a corporation, BLACK COMPANY,  
a corporation, DOE ONE, DOE TWO, DOE  
THREE, DOE FOUR, DOE FIVE, DOESIX,  
DOE SEVEN and DOE EIGHT,

Defendants.

### COMPLAINT

To: The Honorable the Judges of the District Court  
of the United States, for the Southern District  
of California, Central Division:

Rudolph Lensch of the City and County of Los Angeles, and Paul Leder of the City of Alhambra, County of Los Angeles, and State of California, plaintiffs, bring this, their Bill of Complaint, against Metallizing Company of America, a corporation, L. E. Kunkler, Charles Boyden, Joseph Gossner, Doe Company, a corporation, Black Company, a corporation, Doe One, Doe Two, Doe Three, Doe Four, Doe Five, Doe Six, Doe Seven and Doe Eight, defendants, and complain and say that:

### I.

The jurisdiction of the Court depends upon the provisions of the Revised Statutes of the United States respecting infringement of Letters Patent for inventions.

### II.

This is a suit in equity for infringement of U. S. Letters Patent No. 2,096,119, for improvements in Metal Spray gun, issued to Rudolph Lensch and Paul Leder, the plaintiffs, on [1\*] October 19, 1937, and for an injunction and an accounting for damages and profits.

### III.

The plaintiffs, Rudolph Lensch, a citizen of the United States, and Paul Leder, a citizen of Germany, both residing in the County of Los Angeles, State of California, and whose post office addresses are respectively, 365 North Avenue 52, Los Angeles, California, and 16 Aurora Terrace, Alhambra, Cali-

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\*Page numbering appearing at foot of page of original certified Transcript of Record.



fornia, are the patentees and owners of the patent in suit.

The defendant, Metallizing Company of America is a corporation duly organized and existing under the laws of the State of California, with its principal place of business in Los Angeles, California, and the defendant L. E. Kunkler is President and defendants Charles Boyden and Joseph Gossner are Vice-Presidents of the Metallizing Company of America.

The plaintiffs respectfully ask leave of this Honorable Court to substitute herein the true names of the defendants Doe Company, a corporation, Black Company, a corporation, Doe One, Doe Two, Doe Three, Doe Four, Doe Five, Doe Six, Doe Seven and Doe Eight, when information relative to the corporate identity of said Doe Company and Black Company and the capacities of the respective Doe defendants is ascertained.

#### IV.

Rudolph Lensch and Paul Leder, being residents of California, in the United States of America, and being within the meaning of the statutes of the United States, the first, original and joint inventors of certain improvements in metal spray guns, and being entitled to a patent therefor under the provisions of said statutes, duly applied on April 13th, 1936, to the Commissioner of Patents of the United States for Letters Patent for said improve-

ments, which were not known or used by others in this or any foreign country before their discovery or invention thereof, [2] and were not patented or described in any printed publication in this or any foreign country before their invention or discovery thereof, for more than two years prior to said application for patent, and not in public use or on sale in this country for more than two years prior to said application and not abandoned to the public, and that said invention has not been patented nor caused to be patented by said inventors, or by their legal representatives or assigns in any country foreign to the United States of America upon an application filed more than twelve months prior to the filing date of said application for United States Letters Patent.

That all the requirements of the statutes having been complied with, there were under date of October 19, 1937, duly granted and issued to the said Rudolph Lensch and Paul Leder, Letters Patent of the United States, No. 2,096,119, whereby there was secured to the said Rudolph Lensch and Paul Leder, their legal representatives and assigns for the term of seventeen years from October 19th, 1937, the exclusive right to make, use and sell said improvements, as will duly appear by said Letters Patent, proferet of which is now made, and a Patent Office copy of which is marked Exhibit "A", and by reference made a part hereof, is attached to this Bill of Complaint.

## V.

That the invention covered by said patent is a metal spray gun, characterized among other things by the following claims, to-wit:

2. "In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears, and wire feeding wheels, said member including housings for said turbine and gears and an open channel in its walls exteriorly of said housings, said wheels being adapted for rotation in said channel, a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having control valves and a nozzle base, a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit, and means including an abutment between the nozzle base and the walls of said member [3] for releasably confining said units in operative association whereby said wire feeding wheels are visibly disposed in said channel.

3. "In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and a pair of wire feeding wheels, said member providing housings for said turbine and gears and having an open channel in its walls between said housings, one of said wire feeding wheels being mounted on a shaft extending from the transmission gears beyond the housing thereof and adapted to rotate

in said channel, the other of said wire feeding wheels being pivotally mounted on said member and adapted for rotation in said channel, and means for holding the said wire feeding wheels in cooperative engagement during the feeding of wire.

4. "A wire feeding mechanism for a metal spray gun comprising a member having a turbine, transmission gears, and a pair of wire feeding wheels, means for effecting the visible feed of wire through said wheels comprising: an open channel in the walls of said member between the turbine and gear housings thereof, a wire feeding wheel mounted between the sides of said channel and actuated by said transmission gears, a wire feeding wheel hingedly mounted on said member and adapted for rotation in said channel, and a spring latch for holding said hingedly mounted wire feeding wheel in engagement with said first wire feeding wheel during the feeding of wire."

## VI.

That the plaintiffs, Rudolph Lensch and Paul Leder, are and have at all times since its issue been the owners of said patent.

## VII.

That plaintiffs have engaged at considerable effort and substantial expense in the manufacture and sale of metal spray guns embodying the inven-

tion of the patent in suit and have built up a considerable business with such manufacture and sale.

### VIII.

That since the issue of the patent in suit, the plaintiffs have marked metal spray guns sold by them with the number of said patent.

### IX.

That upon information and belief since the issuance of said letters patent as aforesaid, and within the six years last past within the Southern District of California, and elsewhere in the [4] United States of America, defendants, well knowing the premises and the rights and privileges granted and secured to plaintiffs by said Letters Patent and with the intent to injure and deprive plaintiffs of the profits, privileges and advantages accruing to plaintiffs by virtue of said Letters Patent, wilfully, wrongfully, and unlawfully manufactured or caused to be manufactured, sold or caused to be sold, and used or caused to be used, and now is using or causing to be used, devices containing the invention of said Letters Patent in suit and each of them, and in infringement of said Letters Patent in suit.

### X.

That by reason of said unlawful and infringing acts of said defendants, plaintiffs have suffered great damage and injury and as plaintiffs are informed and believe, and therefore allege, defendants have realized profits and advantages, the



amounts of which damages, gains, profits, and advantages are unknown to plaintiffs and can be ascertained only by an accounting.

## XII.

That the defendants were fully notified of their infringement of the said Letters Patent of the United States aforesaid and were requested to desist therefrom, but that defendants have disregarded such notice and have refused and now continue to refuse to desist from the said infringement of said Letters Patent in suit.

## XIII.

That plaintiffs are informed and believe, and therefore allege that defendants intend and threaten to continue to make, sell and use and/or cause other to make, sell and use devices embodying the invention of said Letters Patent aforesaid in infringement of the said Letters Patent aforesaid, and will so continue to do unless restrained therefrom by this Honorable Court; and that unless defendants are so restrained, plaintiffs will suffer great and [5] irreparable damage and injury, for which there is no speedy and adequate remedy at law.

Wherefore, plaintiffs pray:

1. That a decree be entered adjudging plaintiffs' Letters Patent No. 2,096,119 to be good and valid and owned by the plaintiffs and to have been infringed by the defendants.

2. That the defendants, their officers, agents, servants, employees, associates, workmen, attorneys,

and those in active concert or participating with them, and each of them, be perpetually enjoined from further infringing upon the plaintiffs' said Letters Patent and upon the rights of the plaintiffs thereunder.

3. That a temporary injunction be issued to the same purport, tenor, and effect as the perpetual injunction hereinbefore prayed for.

4. That the defendants be required to account and pay the plaintiffs defendants' profits and the damages to plaintiffs from and by reason of the infringement aforesaid, and a sum in excess thereof not to exceed three times the actual damages and profits.

5. That the defendants be required to pay the costs and disbursements of the plaintiffs in this suit.

6. That plaintiffs have such other and further relief in the premises as to the Court may appear proper and agreeable to equity.

RUDOLPH LENSCH

PAUL LEDER

Plaintiffs

AVERY M. BLOUNT

Attorney for Plaintiffs [6]

State of California,  
County of Los Angeles—ss.

Rudolph Lensch, being by me first duly sworn, deposes and says that he is one of the plaintiffs in the above entitled action; that he has read the foregoing complaint and knows the contents thereof; and

that the same is true of his own knowledge, except as to the matters which are therein stated upon his information or belief, and as to those matters that he believes it to be true.

RUDOLPH LENSCH

Subscribed and Sworn to before me this 11 day of January, 1939.

[Seal]

O. G. KEIPER

Notary Public in and for said  
County and State.

EXHIBIT "A"

(Copy of Letters Patent attached, No. 2,096,-  
116, introduced in evidence as Plaintiff's Ex-  
hibit No. 1)

[Endorsed]: Filed Jan. 13, 1939. [7]

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[Title of District Court and Cause.]

ANSWER

To the Honorable Judges of said Court:

Come now defendants Metallizing Company of America, a corporation, L. E. Kunkler and Charles Boyden, and for answer to the Complaint filed herein, allege as follows, to-wit:

I.

Said defendants admit the allegations set forth in paragraph I of said Complaint.



## II.

Said defendants admit that this is a suit charging infringement of Letters Patent No. 2,096,119, for alleged improvements in Metal Spray Guns, issued to Rudolph Lensch and Paul Leder, the plaintiffs, on October 19, 1937, but deny that this is a suit in equity under the new Rules of Civil Procedure.

## III.

Said defendants deny the allegations in the first section of paragraph III of said Complaint; admit the allegations in the second section of paragraph III as to the Metallizing Company of America, L. E. Kunkler and Charles Boyden, only; and make no answer for any other persons named as defendants in said Complaint, or as to the last section of paragraph III thereof.

## IV.

Said defendants Metallizing Company of America, L. E. Kunkler and Charles Boyden, in answer to paragraph IV of said Complaint, deny that Rudolph Lensch and Paul Leder are or were the first, original "and sole" (or joint) inventors of the alleged improve- [9] ments in metal spray guns, or any inventors or discoverers thereof; and deny that they were entitled to a patent therefor under the provisions of the statutes of the United States, but admit that they made application on April 13th, 1936, to the Commissioner of Patents of the United States for letters patent for said alleged improvements, and deny that such alleged improvements

were not known or used by others in this or any foreign country before their alleged invention or discovery thereof; and deny that said alleged improvements were not patented or described in any printed publication in this or any foreign country before their alleged invention or discovery thereof, or for more than two years prior to said alleged application for patent; and deny that said alleged improvements were not in public use or on sale in this country for more than two years prior to said alleged application; and deny that said alleged invention had not been abandoned to the public.

Said defendants have no knowledge as to whether said alleged inventors, plaintiffs herein, have not patented or caused to be patented said alleged invention in any foreign country more than twelve months prior to the filing of said alleged application in the United States Patent Office.

Said defendants deny that all the requirements of the statutes of the United States were complied with, but admit that under date October 19, 1937, there were issued to Rudolph Lensch and Paul Leder, letters patent of the United States No. 2,096,119, for said alleged improvements, but deny that there was secured to said patentees, their legal representatives and assigns, or to anyone, for the term of seventeen years, or for any term whatsoever, the exclusive, or any, right to make, use and sell said alleged improvements as set forth in said alleged letters patent. [10]

## V.

Said defendants deny that the claims set forth in paragraph V of said complaint cover said alleged invention, or that said claims are good and valid; and deny that said claims give to plaintiffs any right or claim of infringement chargeable to said defendants.

## VI.

Said defendants have no knowledge or information about the allegations set forth in paragraph VI of said complaint and therefore deny the same, and leave plaintiffs to their proof thereof.

## VII.

Said defendants deny each and every of the allegations set forth in paragraph VII of said complaint, and call upon plaintiffs to make full proof thereof.

## VIII.

Said defendants deny the allegation set forth in paragraph VIII of said complaint.

## IX.

Said defendants deny each and every allegations set forth in paragraph IX of said complaint, and deny that they have since the issuance of said letters patent, and within the six years last past within the District of California, or elsewhere, in the United States, and with intent to injure and deprive plaintiffs of profits, privileges and advantages alleged as accruing to plaintiffs by virtue of said letters patent, wilfully, wrongfully, and un-

lawfully, or at all, manufactured, or caused to be manufactured, and used, or caused to be used, or that they are now using or causing to be used, any devices containing the alleged inventions of said letters patent in suit, or infringement of said letters patent.

### X.

Said defendants deny that by reason of said alleged unlawful and infringing acts, or of any acts whatsoever, plaintiffs have suffered great damages and injury, or any damage or injury whatsoever, and deny that said defendants have realized profits and advantages of any kind whatsoever from any wrongdoing or alleged infringement of said alleged letters patent. [11]

### No Paragraph XI.

### XII.

Said defendants deny that they were fully notified of any alleged infringement of said alleged letters patent sued on, and deny that they were requested to desist therefrom, and deny that said defendants have disregarded such alleged notice and deny that they have refused or that they now continue to refuse to desist from any said alleged infringement of said alleged letters patent.

### XIII.

Said defendants deny that they intend, or that they threaten to continue to make and use and/or cause others to make and use any devices embody-

ing the alleged invention of said letters patent, or in infringement of the said letters patent, and deny that they will continue to do so unless restrained therefrom by this Honorable Court: and deny that unless said defendants are restrained, plaintiffs will suffer great and irreparable damage and injury, or any damage or injury whatsoever.

#### Further and Separate Defenses.

#### XIV.

For a first, further and separate answer and defense, said defendants allege that by reason of the state of the prior art existing at the time of said alleged invention by the said Rudolph Lensch and Paul Reder, the alleged invention in Metal Spray Guns, as presented in letters patent No. 2,096,119, was not an invention and did not require or involve the exercise of any invention or inventive faculty for its production, but that said alleged invention and all the essential parts and features and functions thereof have been known to the public generally, and particularly to the trade, for many years, and long prior to April 13, 1936, and that only ordinary mechanical skill, and not invention, was required to produce said alleged invention, and particularly as set forth in said claims 2, 3 and 4 of said letters patent and in said complaint. [12]

#### XV.

For a second further and separate answer and defense, said defendants allege that said Rudolph



Lensch and Paul Leder were not the original, first “and sole” (or joint) inventors or discoverers of any material or substantial part of the alleged invention described and claimed in said letters patent No. 2,096,119; but that long prior to the alleged invention thereof by said Rudolph Lensch and Paul Leder, the alleged invention and every material and substantial part thereof had been known and shown, described and patented by others in and by the following letters patent issued in other countries and in the United States of America, as follows, to-wit:

French patent No. 741,740, December 13, 1932;

French patent No. 680,554, January 22, 1930;

French patent No. 639,039, March 5, 1928;

British patent No. 268,431, March 31, 1927;

British patent No. 440,248, Dec. 23, 1935;

U. S. patent No. 2,102,395, Dec. 14, 1937, filed May 12, 1934; to Valentine;

U. S. patent No. 1,917,523, July 11, 1933, to Irons;

U. S. patent No. 1,987,016, Jan. 8, 1935, to Lensch et al.

U. S. patent No. 1,128,175, Feb. 9, 1915, to Morf;

U. S. patent No. 1,617,166, Feb. 8, 1927, to Schoop;

and other and further prior patents and publications and disclosures, for which diligent search is being made, and it is requested that the same, when

discovered, may be included in the foregoing list of prior disclosures of said alleged invention.

## XVI.

For a third further and separate answer and defense, said defendants call attention to the fact that the claims set forth in said complaint all included therein, in order to secure the allowance thereof by the patent office the structure and arrangement which provides an "open channel" and makes possible a "visible feed" of the wire through said spray gun, and in the arguments made to persuade the Examiner to allow said claims as rewritten for that purpose, said argument sets forth these features as important and repeatedly refers to the advantages of "visible feed" [13] that is: "visible feed of the wire through the gun" by reason of the "open channel" construction; and defendants assert that this is an old feature, as shown in the prior art referred to, and furthermore, is a feature which defendants do not use in the alleged infringing device of defendants.

Wherefore, said defendants pray that the Complaint be dismissed, and they have judgment against plaintiffs, and each of them, for their costs and disbursements.

WM. R. LITZENBERG  
IRVING O. BALTIMORE  
Attorneys for Defendants

[Endorsed]: Filed Feb. 28, 1939. [14]

[Title of District Court and Cause.]

AMENDED ANSWER OR AMENDMENT TO  
THE ANSWER.

Comes now the above-named defendants, and by leave of court first had and obtained, file this their amendment to their answer to the Bill of Complaint filed herein, by adding the following paragraph after Paragraph XVI, on pages 5 and 6, and before the prayer, as follows, to-wit:

XVII.

For a fourth further and separate answer and defense, said defendants allege that the invention of the patent sued on herein was known and used and circularized and offered for sale for more than two years prior to the filing date of the application on which said patent was issued, which filing date was April 13th 1936; namely as early as April 5th, 1934, and prior thereto, when the Metal Spray Company, by its Manager H. B. Rice, issued a circular letter "To All Distributors and Agents" calling attention to the "New Type Gun" and to the special Bulletin 500; that one of said letters was signed by and sent by said H. B. Rice, as manager of said company, to and was received by Wm. M. Britton, a dealer; and that said original letter and one of the said bulletins 500 are ready and will be offered in evidence to prove such public use and sale.

WM. R. LITZENBERG

IRVING S. BALTIMORE

Attorneys for Defendants.

[Endorsed]: Filed May 2, 1940. [15]



[Title of District Court and Cause.]

### OPINION

This case was tried by the late District Judge William P. James, and, after his death, was transferred to this court. By approved stipulation, the cause is to be decided by me upon the pleadings and the testimony, oral and documentary, and the physical exhibits, received during the trial. Briefs and arguments have been supplied by counsel for each side.

The complaint, filed January 13, 1939, contains the usual allegations of patent grant, ownership, marking, notice and infringement. The patent in suit, No. 2,096,119, for a metal spray gun was applied for April 13, 1936, and was issued to plaintiffs as co-inventors on October 19, 1937. The invention of the patent sued on is alleged to provide "certain new and novel features and advantages beyond the improvements in metal spraying devices as set out in United States Letters patent granted to (plaintiffs) Lensch and Leder, January 8, 1935, on application filed August 29, 1932." The complaint prays for an accounting of profits and damages, triple damages, costs, and a permanent injunction.

The principal issues raised by the pleadings are those of [17] validity and infringement. In respect of validity, defendants' answer sets up certain special defenses, such as want of invention, want of novelty, and anticipation resulting from the publication of certain domestic and foreign patents.



During the trial, defendants offered proof pertaining to certain statutory defenses which had not been pleaded. The court permitted defendants to file an amendment to the answer, wherein it was then alleged that the invention of the patent in suit was "known and used and circularized and offered for sale for more than two years prior to the filing date of the application on which said patent was issued." No prior publication was specifically alleged.

The patent in suit relates to a metal spray gun consisting of two principal parts—a power unit and a combustion unit. Through the use of this tool, metal in the form of wire is reduced to a molten state by means of acetylene gas and oxygen. Knurled wheels, located in an open channel between the walls of the turbine housing and the transmission housing, deliver the wire. This molten metal, fed in a continuous stream through the nozzle of the gun, is then seized upon by an air blast which tends to atomize the metal. The air is, of course, delivered separately from the gas and oxygen. The atoms or particles of molten metal are microscopic in size after leaving the nozzle of the gun and are in a thoroughly molten state when they impinge upon the surface to be sprayed. The velocity of the plaintiff's spray gun at the nozzle is approximately forty thousand feet per minute. The power unit and the combustion unit are releasably associated at an abutment between the nozzle base of the combustion unit and the walls of the power unit casting.

The claims of the patent relied upon by plaintiffs are as follows:

“2. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears, and wire [18] feeding wheels, said member including housings for said turbine and gears and an open channel in its walls exteriorly of said housings, said wheels being adapted for rotation in said channel, a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having control valves and a nozzle base, a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit, and means including an abutment between the nozzle base and the walls of said member for releasably confining said units in operative association whereby said wire feeding wheels are visibly disposed in said channel.

“3. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and a pair of wire feeding wheels, said member providing housings for said turbine and gears and having an open channel in its walls between said housings, one of said wire feeding wheels being mounted on a shaft extending from the transmission gears beyond the housing thereof and adapted to rotate in said channel, the other of said wire feeding wheels being pivotally mounted on said member

and adapted for rotation in said channel, and means for holding the said wire feeding wheels in cooperative engagement during the feeding of wire.

“4. A wire feeding mechanism for a metal spray gun comprising a member having a turbine, transmission gears, and a pair of wire feeding wheels, means for effecting the visible feed of wire through said wheels comprising: an open channel in the walls of said member between the turbine and gear housings thereof, a wire feeding wheel mounted between the sides of said channel and actuated by said transmission gears, a wire feeding wheel hingedly mounted on said member and adapted for rotation in said channel, and a spring latch for holding said hingedly mounted wire feeding wheel in engagement with said first wire feeding wheel during the feeding of wire.” [19]

Figures 1, 2 and 3 referred to in the patent are as follows:

(Here appear Sheet 1 and Sheet 2 of the drawings in the patent in suit, No. 2,096,119, admitted in evidence as Plaintiffs' Exhibit No. 1.) [20]

Plaintiffs contend that certain important features of their device are novel over all the prior art disclosures, and claim that the infringing device known as the “Mogul” gun is a substantial replica of their

device. This "Mogul" gun is an improvement by defendants upon an earlier gun made by them and known as the "Metallizer" gun. In support of their contention of infringement, plaintiffs point out that the alleged infringing device comprises a power unit including a wire feeding unit and a combustion unit, and that the upper wire wheel occupies the identical relationship that it does in the patented device. They urge that the upper wire wheel operates in an open channel, such as the patent discloses, and that the wire feeding is visible to the operator, which same advantage is derivable from use of the patented gun. In case of back fire, the open channel will permit the safe dissipation of accumulated gases (just as it does in the patented device.) In case of damage to the combustion unit, as in the patented structure, that unit may be removed and repaired or replaced at relatively slight expense, when compared with repairing or replacing the entire gun—which would ordinarily be necessary in case of damage to the Metallizer or to spray guns of the prior art.

Defendants, in the main, admit these statements as to their device, but challenge those relating to the "open channel" and "visibility" to the operator. They deny infringement and urge that, if plaintiffs' claims are interpreted sufficiently broadly to show infringement, they are invalid on the prior art.

Let us consider first the contention of defendants that there was a constructive abandonment of plaintiffs' alleged invention prior to the application for



letters patent. It is conceded that a patent is void if the invention covered thereby was in public use or on sale earlier than two years (under the applicable statute) before the patent application. R. S. 4886; 35 USCA Sec. 31. As to what is a public use or an offer for sale is a question of [21] fact. It has been repeatedly held that the burden of proof of an anticipation is upon the party asserting it, and that this burden must be sustained by clear and convincing evidence. *The Barbed Wire Patent*, 143 U. S. 275; *Deering v. Winona Harvester Works*, 155 U. S. 286; *Symington v. National Co.*, 250 U. S. 383; *Eibel v. Minnesota & Ontario Paper Co.*, 261 U. S. 45; *Stoody Co. v. Mills Alloys*, (Judge Sawtelle, CCA 9) 67 F. 2d 807 (20 USPQ 1). Cf. *Paraffine Companies v. McEverlast, Inc.*, (Judge Denman, CCA 9) 84 F. 2d 335. And it has also been held that abandonment must be proved in like manner. *Research Products Co. v. Tretolite Co.* (CCA 9) 106 F. 2d 530, 534; *Byrne Mfg. Co. v. American Flange & Mfg. Co.* (CCA 6) 87 F. 2d 783; *Walker on Patents*, Deller's Edition, Sec. 100.

Experimental use is never public use within the meaning of the statute, if it is conducted in good faith for the purpose of testing the qualities of the invention. *Electric Storage Battery Co. v. Shimadzu*, 307 U. S. 5; *Research Products Co. v. Tretolite Co.*, *supra*; *Walker*, Secs. 84 and 85; Meigs' "Time, the Essence of Patent Law," p. 8.

As hereinbefore indicated, it is alleged in defendants' answer that the invention in suit was "known

and used and circularized and offered for sale for more than two years," etc. It is provided, in effect, in R. S. 4886, as amended, that a patent is invalid if the alleged invention has been patented or described in any printed publication in this or any foreign country before the invention or discovery thereof or more than two years prior to the patent application. (See R. S. 4920, as amended.) Whether by "circularized" the pleader meant "published", or "offered for sale", the character of evidence required under this provision in proof thereof should be, in principle, no different from proof of anticipation or abandonment.

When these rules of law are applied to the evidence on this [22] point, we find it falls far short of the required proof, to establish that the patent invention "was known and used and circularized and offered for sale" more than two years prior to April 13, 1936, the date of the application therefor. No physical or documentary evidence of substantial probative value was supplied, and the oral testimony was contradictory and unsatisfactory. Certain it is that the testimony did not show satisfactorily that the one metal spray gun, manufactured by plaintiffs, was subjected to anything more than a private or experimental use, prior to April 13, 1934. Nor was any publication properly shown within the meaning of the statute. Granting the witnesses to be of the highest character and entirely conscientious in their desire to tell the truth, oral testimony, unsupported by exhibits or documents, tending to show use, sale,



abandonment or publication, is unsatisfactory, particularly if the oral testimony be taken after the lapse of several years. The Barbed Wire Patent, *supra*; *Deering v. Winona Harvester Works, supra*.

Defendants did not specifically plead the defense of constructive abandonment and did not comply with the statute in giving thirty days' notice thereof prior to trial. Upon the objection being raised, Judge James permitted an amendment to the answer to incorporate the defense. He then adjourned court for one day to give plaintiffs an opportunity to make the necessary preparations for meeting the additional defense. Because of our view, as herebefore expressed, on the sufficiency of the evidence, it is unnecessary for us to determine whether or not the new Federal Rules of Civil Procedure abrogate or supersede this statute. See note on Advisory Committee to Rule 8(b). See also *Oswell v. Bloomfield*, 113 F. 2d 377.

Defendants' answer sets up ten patents which are alleged to anticipate the patent in suit. Three of those are French and two are British. The foreign patents are apparently presented to show [23] the state of the art. The patents alleged to be anticipatory are as follows:

1. Morf, No. 1,128,175, Feb. 9, 1915;
2. British, No. 268,431, Mar. 31, 1927;
3. French, No. 639,039, Mar. 5, 1928;
4. French, No. 680,554, Jan. 22, 1930 (filed Dec., 1928);
5. French, No. 741,740, Dec. 13, 1932;

6. Irons, No. 1,917,523, July 11, 1933;
7. British, No. 440,248, Dec. 23, 1935;
8. Lensch and Leder, No. 1,987,016, Jan. 8, 1935;
9. Schoop, No. 1,617,166, Feb. 8, 1927;
10. Valentine, No. 2,102,395, Dec. 14, 1937.

Probably the first inventive act in the art of spraying molten metal onto a surface was described in the Morf U. S. patent issued February 9, 1915 (No. 1, supra), in which the idea of reducing metal to molten form and spraying it onto a surface was disclosed to the public; and in this patent the idea of moving a rod into intersection with burning gases, under pressure for the purpose, is also shown and explained.<sup>1</sup> See *Emmett v. Metals Processing Corporation* (9 CCA, April 7, 1941, No. 9461). After the invention of the general idea of converting a metal rod or wire into a spray of liquid, then engineering and mechanical skill came into play to provide different means and mechanisms for accomplishing the process or invention.

It seems to the court that the old French patent No. 680,554, filed December, 1928 (No. 4, supra), took up a large part of the possible inventive field in this art. It teaches (1) a box or body with a handle, with means therein for feeding a metal wire through the box into a gas combustion unit or nozzle mounted thereon, with means, also, for supplying the

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(1) The Schoop patent No. 1,128,058 (not in evidence) issued February 9, 1915, the same date as the Morf patent, also relates to metal spraying.

combustible gases into the nozzle in order to melt the metal wire and carry it through the nozzle; (2) a turbine for driving the wire feeding gears; (3) a spring-pressed [24] upper feed wheel, bearing yieldingly on the wire in order to obtain the pressure for proper feeding; (4) a separate housing for the turbine in the box and also separate housing in the box for the turbine-driven gears; (5) a space or passageway or channel for the feed wheels and wire being moved to the nozzle.

As stated, the application for the patent sued on indicated many features as objects of the invention. Most of these were already known in the art. We think that a detailed discussion of all of the prior art patents contained in the record is not necessary. The file wrapper reveals that, in the first Patent Office action on petitioners' original application, the examiner rejected Claims 1 and 4 on the Irons patent, No. 1,917,523, issued July 11, 1933, (No. 6, *supra*); and Claims 2 and 3 on the British patent, No. 268,431 of 1927 (No. 2, *supra*). These two were the only patents considered by the Patent Office examiner. Claim 5 was rejected as drawn to an old combination.<sup>2</sup>

That the general objects of the invention set out in the patent specifications were already known in the art is also shown by some of the patents not con-

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(2) Claim 6 was allowed and became Claim 1 of the amended claims. It has to do with a baffle in the nozzle base and is not involved herein.

sidered by the Patent Office, as well as the patents mentioned. The idea of "controlling the wire feed through the gun whereby any desired pressure may be exerted on the wire" is taught in Valentine patent (No. 10, *supra*), by the Irons patent (No. 6, *supra*), and by the French patent (No. 4, *supra*). The idea of providing "a hinged latch construction whereby the top feeding wheel is releasedly confined" and whereby it "can be unlatched and lifted on its hinged connection out of the way" are also shown in the old French patent (No. 4, *supra*) and in plaintiffs' old patent (No. 8, *supra*). The idea of forming "the combustion unit of the gun as a separate and distinct entity from the mechanical unit or power plant of the gun" was also old in the French patent (No. 4, *supra*), in the Metallizing gun of the defendants and in the Valentine patent (No. 10, *supra*). The idea of providing in a spray gun "a casting as an integral part which will contain the housings [25] for encompassing the gears of the transmission as well as the turbine for driving the transmission gears and to so form the casting that it will have a channel way for the feed wire, free and clear of the interiors of the gear and turbine housings" was also old in the French patent (No. 4, *supra*) and in the French gun which was received in evidence as defendants' Exhibit "N" and in the publication "El Soldador," defendants' Exhibit "O".

By amendments filed in the application, the attorney for applicants, plaintiffs herein, cancelled

Claims 1, 2, 3, 4 and 5; thereby acquiescing in the rejection of the original claims on the patents cited, and submitted Claims 2, 3 and 4 in suit, hereinbefore set out in full.

This is admittedly a patent of a secondary nature, which must be strictly construed. Walker on Patents, (Deller's Edition) Sec. 471 p. 1709 et seq. Whenever an applicant acquiesces in the rejection of his claims of a broader scope, on references cited by the Patent Office, and accepts claims of a narrower scope, he will not thereafter be permitted to seek to include, through an application of the doctrine of equivalents or otherwise, subject matter which appears to have been relinquished. *Smith v. Magic City Kennel Club*, 282 U. S. 784; *I. T. S. Rubber Co. v. Essex Co.*, 272 U. S. 429.

An examination of the original claims, as presented to the Patent Office and rejected, shows the following as to certain claims:

Claim 2. "In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and wire feeding wheels, said member having a passageway exteriorly of the gear housings thereof and the walls of said passageway providing a channel; a shaft extending from the transmission gears having a wire feeding wheel adapted to rotate in said channel, a second wire feeding wheel mounted on a hinge [26] secured to the body of said member and means for holding the said



hinged wire feeding wheel in rotatable engagement with said first wire feeding wheel.”

Claim 3. “In a metal spray gun, a unitary member comprising the power plant thereof, said member having a turbine, transmission gears and wire feeding device, a channel way in said member free and clear of the interiors of its gear chambers, said wire feeding device comprising an upper and lower wheel and each of said wheels having a gear portion and a knurled portion, said lower wheel being adapted to rotate between the walls of said channel and said upper wheel having a pivotal mounting attached to the power plant member, and means for bringing the gear portion of the upper wire feeding wheel into meshed engagement with the gear portion of the lower wire feeding wheel during the feeding of wire through the knurled portions of said wheels.”

In these claims, which were so rejected on Irons (No. 6, *supra*) and the British patent (No. 2, *supra*), the only two patents cited, the broad reference is to “a passageway exteriorly of the gear housings thereof and the walls of the said passageway providing a channel” and “a channel way.” Necessarily, there must be a space or a passageway or a channel through which the wire may pass and in which the knurled wheels may operate to feed the wire. There is nothing said in these claims, it will be noticed, about the channel being “open.” It might be



simply a chamber or a space in the form of a channel in the box or body—just as in most of the box type of spray guns in the field.

In the final Claims 2, 3 and 4, as allowed and hereinafter quoted, the following limiting structural features are shown: The reference is not to a “channel” or a “passageway” as in the original claims, but, in each instance, to an “open channel.” The final words of the single sentence of Claim 2, which apparently [27] refers to the entire claim, are: “whereby said wire feeding wheels are *visibly* disposed in said channel” (italics are the Court’s); the words “said channel,” in turn, referring back to the words “open channel.” The abutment referred to in this claim is at one side only and to this the nozzle base is attached by Screws 63. This construction makes it possible to permit the cutting away of the opposite side, leaving the space completely open for the pipes, etc. (See Figures 1, 2 and 3 of the drawings, *supra*). Claim 3 contains this limitation: “having an *open channel* in its walls *between* said housings” (italics are the Court’s). Claim 4 reads in part: “means for effecting the *visible feed* in the walls of said member *between* the turbine and gear housings thereof \* \* \*” (italics are the Court’s). The Irons patent (No. 6, *supra*) and the British patent (No. 2 *supra*), cited by the examiner against the original claims, clearly have the features of a passageway or space or channel or channel way—whatever one chooses to call it. So do most of the devices then in the field. Hence, ap-

parently, applicants amended their application to provide for an "open channel" between the walls of the housings in the body, thus securing their patent.

Subjecting plaintiffs' Claims 2, 3 and 4, in suit, to a critical examination, we are forced to the conclusion that applicants voluntarily limited these claims so as to differentiate their structure from the references cited, their own original structure, and other devices well known in the art. Possible irregularities in wire feed—particularly with the softer metals such as lead, tin and zinc—had caused inequalities in the metal sprayed deposits, and had resulted in frequent stopping of operations for correction. Applicants proposed to afford a means whereby the wire feeding could be constantly within the operator's vision, making it possible to correct irregularities in feeding with their resultant and expensive shutdowns.

In plaintiff's gun visibility during operation is always [28] present. The wire feed wheels are visible from the rear, and the righthand side; the construction giving bearings for both ends of the shafts without using the closed box type of body. In the Mogul gun, during operations, only the outer end of the rear wire guide can be seen as it projects out of the body. From the left hand, the side of the gear wheel attached to the upper feed wheel is visible, but it is hardly possible to see either the feed wheel itself or the moving wire. Certainly it would be impractical to attempt such an observa-

tion during operations. The feeding is not visible from the righthand side and it would be impossible to operate the gun and at the same time peer down from the top or front and see the wire passing into the combustion chamber.

Practically all the guns in the art had facilities for inspection after shutdown. Most of these provided a hinged cover of the body for this purpose. Inspection, however, is one thing and observation during actual operations is quite another. The open or cutaway body of plaintiffs' gun provides that visibility which applicants apparently sought. It seems to the court that, to construe these claims as readable on defendants' device, would be to give them a construction which would render the claims invalid on the prior art.

If there be any ambiguity or if the true scope of applicants' invention is not clear, our Ninth Circuit Court of Appeals has in effect held that reference may be made to the file wrapper and arguments. *Fullerton Walnut Growers' Ass'n v. Anderson-Barngrover Mfg. Co.*, 166 F. 443, 452. See also *Lektophone Corporation v. Rola Co.*, 27 F. 2d 758, affirmed 34 F. 2d 764. This we believe to be the proper interpretation of the decision of the Supreme Court in *Keystone Driller Co. v. Northwest Engineering Corp.* (1935), 294 U. S. 42. (For a discussion of the rule in this circuit and in other circuits, see "File Wrapper Estoppel" by Vern L. Oldham in 20 *Journal of the Patent Office Society*

115 (1938) and case [29] note in 8 George Washington Law Review 871 (March, 1940).)

If, then, the scope of plaintiffs' claims is not entirely clear, let us see what arguments counsel for applicants used in order to persuade the examiner to allow the amended claims, after he had rejected the original claims. We quote (Record pp. 106-8):

“Relative to Irons, No. 1,917,523: It is desired to note that Irons does not provide for the visible feed of the wire through the gun. He does not contemplate a wire feeding mechanism other than the ‘conventional’ construction which includes the wire feeding mechanism and feed wheels in the same housing without the ability to see the wire except by shutting off the tool and opening the cover of the mechanism housing, such, for example, as the Schoop type of wire feeding mechanism as contained in a square box housing. While Irons does provide separated power and combustion units, joining them together for operation, his structure does not teach applicant that with the conventional square box gear and feed wheel housing a channel can be formed exteriorly of the walls of the mechanism housing by the abutment of the nozzle base and the gear housing for the reception of the wire feeding wheels and so that the feed wheels will be open to view and the wire passing therethrough can be observed in its feeding. This utility in a metal

spray gun is of great importance to a gun operator, particularly when inequalities in the metal sprayed deposits, due to irregularity of wire feed, require wire adjustments to be made while the gun is operating. Furthermore, the balling up of the wire, particularly with the softer metals such as lead, tin and zinc, requires expensive shut-downs and results in low output of the tool."

Then referring to the earlier patent of plaintiffs, No. 1,987,016 (No. 8, *supra*), counsel urges: [30]

"It is desired to make this patent of record in this issue, as it has a direct bearing upon the removal of the wire feeding wheels of a metal spray gun from the gear box and mechanism contained therein, whereby visible feed of the wire is occasioned and the destruction of the gears and parts of the feeding mechanism from particles of the wire cut off by the knurled feed wheels is done away with. \* \* \*"

"The new claims herewith presented are thought to fully differentiate applicants' structure over the references cited as well as over their original structure, and favorable consideration and allowance of same is courteously asked."

Within the limits indicated, the court finds the claims of patent valid, but not infringed.

Counsel for defendants will prepare and submit, within twenty days, under Rule 8 of this court,



findings of fact and conclusions of law and form of decree, in accordance with the foregoing. Objections thereto shall be filed within ten days thereafter.

It is so ordered.

Dated: June 14th, 1941.

RALPH E. JENNEY

United States District Judge

[Endorsed]: Filed Jun. 14, 1941. [31]

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District Court of the United States, Southern  
District of California, Central Division

No. 201-RJ-Civil

RUDOLPH LENSCH and PAUL LEDER,  
Plaintiffs,

vs.

METALLIZING COMPANY OF AMERICA, a  
corporation, L. E. KUNKLER, CHARLES  
BOYDEN, JOSEPH GOSSNER,  
Defendants.

### MINUTE ORDER

Judge Ralph E. Jenney  
Tuesday, June 24, 1941.

It is hereby ordered, adjudged and decreed that the following change be made in the Decision of the Court dated June 14, 1941:



On page 18, strike out the paragraph reading as follows:

“If, as we have said, there is any question about the scope of plaintiffs’ claims, the argument of their counsel seems to make it clear.”

RALPH E. JENNEY

[Endorsed]: Filed Jun. 24, 1941. [32]

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[Title of District Court and Cause.]

FINDINGS OF FACT

The above-entitled suit was brought on to be heard by the late Judge William P. James on April 30, 1940, and trial was continued on May 2nd and 3rd, 1940; oral arguments were made and written briefs were submitted, and the case was fully submitted prior to his death. After the death of Judge James, this cause was transferred to the Hon. Ralph E. Jenney, and by approved stipulation it was to be decided by said Judge Jenney upon the pleadings and the evidence, oral and documentary, and the physical exhibits submitted during the trial. Additional written briefs were also presented to Judge Jenney by counsel for each side.

The Court has announced its decision and now makes the following

FINDINGS OF FACT:

The patent in suit, No. 2,096,119, for a metal spray gun was applied for April 13, 1936, and was

issued to plaintiffs as co-inventors on October 19, 1937.

The invention of the patent sued on was alleged to be an improvement on a prior invention of the same inventors, a patent for which was issued January 8, 1935, on an application filed August 29, 1932, which patent was a part of the prior art at the time the patent sued on was applied for.

The issues involved are those of validity and infringement.

The invention of the patent sued on relates to a metal spray gun consisting of two principal parts—a power unit and a combustion unit, wherein metal in the form of a wire is reduced to a [33] molten state by means of acetylene gas and oxygen. Knurled wheels located in an open channel, deliver the wire to the combustion unit where it is converted into atomized molten metal. The power unit and the combustion unit are releasably associated at an abutment between the nozzle base of the combustion unit and the walls of the power unit casting. The claims of the patent relied upon by plaintiffs were claims 2, 3 and 4.

The “Mogul” gun, which is defendants’ gun, alleged to infringe said claims, was also an improvement upon an earlier gun made by defendants and known as the “Metallizer” gun.

Said “Mogul” gun embodied a power unit, including a wire feeding unit, and a combustion unit, and the upper wire feeding wheel occupies the same relationship that it does in the patented gun.

Defendants' gun does not have an "open channel" or the "visibility" to the operator which plaintiffs' patented gun has.

The first inventive act in the art of spraying molten metal onto a surface was described in the Morf U. S. patent, issued February 9, 1915, in which the idea of reducing metal to molten form and spraying it onto a surface was disclosed to the public; and in this patent the idea of moving a rod into intersection with burning gas, under pressure for the purpose, is also shown and explained.

The old French patent No. 680,554, filed December, 1928, took up a large part of the possible inventive field in this art. It shows (1) a box or body with a handle, with means therein for feeding a metal wire through the box into a gas combustion unit or nozzle mounted thereon, with means, also for supplying the combustible gases into the nozzle; (2) a turbine for driving the wire feeding gears; (3) a spring-pressed upper feed wheel, bearing yieldingly on the wire in order to obtain the pressure for proper feeding; (4) a separate housing for the turbine in the box and also separate housing in the box for the turbine- [34] driven gears; (5) a space or passageway or channel for the feed wheels and wire being moved to the nozzle.

The file wrapper reveals that, in the first office action on petitioners' original application, the examiner rejected claims 1 and 4 on the Irons patent No. 1,917,523, issued July 11, 1933; and claims 2 and 3 on the British patent No. 268,431 of 1927.

Claim 5 was rejected as drawn to an old combination.

The general objects of the invention, set out in the patent specifications, were already known in the art and were also shown by some of the patents not considered by the patent office.

The idea of controlling the wire feed through the gun "whereby any desired pressure may be exerted on the wire" is shown in the Valentine patent No. 2,102,395 and in the Irons patent No. 1,917,523, and in the French patent No. 680,554.

The idea of providing "a hinged latch construction whereby it can be unlatched and lifted on its hinged connection out of the way" is also shown in the old French patent No. 680,554, and in plaintiffs' first patent.

The idea of forming "the combustion unit of a gun as a separate and distinct entity from the mechanical unit or power plant of the gun" is also old in said French patent; in the Metallizing gun of the defendants, and also in the Valentine patent.

The idea of providing in a spray gun "a casting as an integral part which will contain the housings for encompassing the gears of the transmission, as well as the turbine for driving the transmission gears, and to so form the casting that it will have a channel way for the feed wire, free and clear of the interiors of the gear and turbine housings," was also shown to be old in the French patent No. 680,554, and in the French gun which was received in evidence as defendants' Exhibit "N", and in the

publication "El Soldador," Defendants' Exhibit "O". [35]

By amendment filed in the application, the attorney for applicants, plaintiffs herein, cancelled claims 1, 2, 3, 4 and 5; thereby acquiescing in the rejection of the original claims on the patents cited, and submitted claims 2, 3 and 4 in suit.

The patent sued on is a secondary patent and must be strictly construed.

In the original claims submitted there was only a broad reference to "a passageway exteriorly of the gear housings thereof and the walls of the said passageway providing a channel" and "a channel way." There is nothing said in these rejected claims about the channel being "open".

Claims 2, 3 and 4, as allowed, contain the following limiting structural features: The reference is not to a "channel" or a "passageway" as in the original claims, but, in each instance, to an "open channel." The final words of the single sentence of claim 2, which apparently refers to the entire claim, are: "whereby said wire feeding wheels are VISIBLY disposed in said channel"; the words "said channel" in turn, referring back to the words "open channel."

The abutment referred to in claim 2 is at one side only and to this the nozzle base is attached by screws 63.

This construction makes it possible to permit the cutting away of the opposite side, leaving the space



completely open for the pipes, etc. (see Figures 1, 2 and 3 of the drawings, *supra*).

Claim 3 contains this limitation: "having an OPEN CHANNEL in its walls BETWEEN said housings.

Claim 4 reads in part: "means for effecting the VISIBLE FEED in the walls of said member BETWEEN the turbine and gear housings thereof . . ."

The Irons patent and the British patent cited by the examiner against the original claims, clearly have the features of a passageway or space or channel or channel way—whatever one chooses to call it. So do most of the devices then in the field. [36]

Applicants amended their application to provide for an "open channel" between the walls of the housings in the body, thus securing their patent.

Applicants voluntarily limited claims 2, 3 and 4 of the patent in suit so as to differentiate their structure from the references cited, including their own original patent and other devices well known in the art.

Possible irregularities in wire feed—particularly with the softer metals such as lead, tin and zinc—caused inequalities in the metal sprayed deposit, and had resulted in frequent stopping of operations for correction.

Applicants provided a means whereby the wire feeding could be constantly within the operator's vision, making it possible to correct irregularities in feeding with their resultant and expensive shut-downs.



In plaintiffs' gun visibility during operation is always present. The wire feed wheels are visible from the rear, and the righthand side; the construction giving bearings for both ends of the shafts without using the closed box type of body.

In the Mogul gun, during operation, only the outer end of the rear wire guide can be seen as it projects out of the body. From the left hand, the side of the gear wheel attached to the upper feed wheel is visible, but it is hardly possible to see either the feed wheel itself or the moving wire. It would be impractical to attempt such an observation during operation. The feeding is not visible from the righthand side and it would be impossible to operate the gun and at the same time peer down from the top or front and see the wire passing into the combustion chamber.

Practically all the guns in the art had facilities for inspection after shutdown. Most of these provided a hinged cover of the body for this purpose. Inspection, however, is one thing and observation during actual operation is quite another. [37]

The open or cutaway body of plaintiffs' gun provides that visibility which applicants apparently sought.

To construe these claims as readable on defendants' device would be to give them a construction which would render the claims invalid on the prior art.

The argument of counsel prosecuting the application on which the patent in suit issued, taken from the file wrapper, under the decision of Fullerton

Walnut Growers' Ass'n v. Anderson-Barngrover Mfg. Co., 166 Fed. 443, 452, and other decisions, makes clear any question about the scope of plaintiffs' claims.

Within the limits indicated, the court finds the claims of the patent valid, but not infringed.

### CONCLUSIONS OF LAW

That the patent in suit is a secondary patent and must be strictly construed.

That the claims of the patent in suit are all limited to a construction of spray gun having an open channel to provide visibility of the feed wheels and wire during actual operation.

That to construe the claims of the patent in suit as readable on defendants' device would be to give them a construction which would render them invalid on the prior art.

That within the limits indicated, the claims of the patent sued on are valid, but not infringed by defendants' "Mogul" gun.

That defendants are entitled to judgment as prayed for.

Let judgment be entered accordingly.

Dated Jul 8, 1941.

RALPH E. JENNEY

Judge

Approved as to form:

.....  
.....

Attorneys for Plaintiffs [38]

Received copy of the within Findings this 26 day of June, 1941. 1 P. M.

AVERY M. BLOUNT

Attorney for Plaintiff. [39]

[Endorsed]: Filed Jul. 9th, 1941.

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In the United States District Court, Southern  
District of California, Central Division

No. 201-RJ. Civil

RUDOLH LENSCH and PAUL LEDER,

Plaintiffs,

vs.

METALLIZING COMPANY OF AMERICA, a  
corporation, L. E. KUNKLER, CHARLES  
BOYDEN, JOSEPH GOSSNER,

Defendants.

### JUDGMENT FOR DEFENDANTS.

The above-entitled suit was brought on to be heard by the late Judge William P. James on April 30, 1940, and trial was continued on May 2nd and 3rd, 1940; oral arguments were made and written briefs were submitted, and the case was fully submitted prior to his death. After the death of Judge James, this cause was transferred to the Hon. Ralph E. Jenney, and by approved stipulation it was to be decided by said Judge Jenney upon the pleadings and the evidence, oral and documentary, and the

physical exhibits submitted during the trial. Additional written briefs were also presented to Judge Jenney by counsel for each side; and the court being fully advised in the premises:

It Is Ordered, Adjudged and Decreed that plaintiffs' patent No. 2,096,119 in suit, within the limits indicated, is valid, but not infringed by defendants' "Mogul" gun, and judgment in favor of defendants is hereby made, with the dismissal of plaintiffs' action, with prejudice, with costs to defendants, including the Reporters fees.

Costs taxed at \$62.45.

Jul. 8, 1941.

RALPH E. JENNEY

Judge

Approved as to form:

.....  
Attorneys for Plaintiffs.

Judgment entered July 9, 1941. Docketed July 9, 1941, Book 5, Page 842.

R. S. ZIMMERMAN, Clerk,  
By R. B. CLIFTON, Deputy. [40]

Received copy of the within Judgment this 26 day of June, 1941. 1 P. M.

AVERY M. BLOUNT

Attorney for Plaintiffs. [41]

[Endorsed]: Filed July 9, 1941.

[Title of District Court and Cause.]

NOTICE OF APPEAL

Notice Is Hereby Given that Rudolph Lensch and Paul Leder, plaintiffs above named, hereby appeal to the Circuit Court of Appeals for the Ninth Circuit from the final judgment entered in this action on July 9, 1941.

HERBERT A. HUEBNER

Attorney for Plaintiffs and Appellants  
520 Title Insurance Building  
Los Angeles, California  
Telephone: MIchigan 3821

[Endorsed]: Filed & mailed copy to Wm. R. Litzenberg, Atty. for Defts. Oct. 8, 1941, R. S. Zimmerman, Clerk. [42]

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[Title of District Court and Cause.]

COST BOND ON APPEAL

Know All Men by These Presents:

That we, Rudolph Lensch and Paul Leder, as Principals, and the National Automobile Insurance Company, a corporation organized and existing under the laws of the State of California and authorized to transact a surety business in the State of California, as Surety, are held and firmly bound unto Metallizing Company of America, a corporation, L. E. Kunkler, Charles Boyden, Joseph Gossner, et al, in the full and just sum of Two Hundred Fifty and No/100 Dollars (\$250.00) to be paid to

the said Metallizing Company of America, a corporation, L. E. Kunkler, Charles Boyden, Joseph Gossner, et al, their certain Attorney, executors, administrators or assigns; to which payment well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly and severally, by these presents.

Sealed with our seals and dated this 6th day of October, in the year of our Lord One Thousand Nine Hundred and Forty One.

Whereas, on July 9th, 1941 a Judgment was entered in the District Court of the United States, Southern District of California, Central Division, in the above entitled case and as the Plaintiffs, Rudolph Lensch and Paul Leder, have filed notice of appeal to the United States Circuit Court of Appeals for the Ninth Circuit, in the State of California.

Now, Therefore, the condition of the above obligation is such that if Rudolph Lensch and Paul Leder, Plaintiffs, shall prosecute his appeal to effect, and answer all costs if the appeal is dismissed or the judgment affirmed, or such costs as the Appellate Court may award if the judgment is modified, then the above obligation to be void; else to remain in full force and virtue.

Acknowledged before me the day and year first above written.

RUDOLPH LENSCH and  
PAUL LEDER  
By PAUL LEDER



NATIONAL AUTOMOBILE  
INSURANCE COMPANY  
By WILLIAM E. FORTNEY  
Attorney-in-Fact

Examined and recommended for approval as provided in Rule #13.

HERBERT A. HUEBNER

This recognizance shall be deemed and construed to contain the "consent and agreement" for summary judgment and execution thereon mentioned in Rule #13 of the District Court. [43]

State of California,  
County of Los Angeles—ss.

On the 6th day of October, in the year 1941, before me, Margaret Murphy, a Notary Public in and for said County and State, personally appeared William E. Fortney, known to me to be the person whose name is subscribed to the within instrument as the Attorney-in-fact of the National Automobile Insurance Company, and acknowledged to me that he subscribed the name of the National Automobile Insurance Company thereto as principal, and his own name as Attorney-in-fact.

[Seal]

MARGARET MURPHY

Notary Public in and for said County and State.

The foregoing bond is approved. Oct. 10, 1941.

RALPH E. JENNEY

Judge.

[Endorsed]: Filed Oct. 10, 1941. [44]

[Title of District Court and Cause.]

CLERK'S CERTIFICATE

I, R. S. Zimmerman, Clerk of the District Court of the United States for the Southern District of California, do hereby certify that the foregoing pages numbered from 1 to 52 inclusive contain full, true and correct copies of Complaint; Answer; Amendment to Answer; Order Transferring Case; Opinion and Decision; Order Amending Decision; Findings of Fact and Conclusions of Law; Judgment; Notice of Appeal; Bond for Costs; Designation of Appellants; Designation of Appellees; Stipulation for Elimination of Certain Parts Designated; Order for Transmission of Original Exhibits; Order Extending Time to Docket Appeal; which, together with the Original Exhibits and Reporter's Transcript of Testimony and Proceedings, constitute the record on appeal to the United States Circuit Court of Appeals for the Ninth Circuit.

I do further certify that the fees of the clerk for copying, comparing, correcting and certifying the foregoing record amount to \$7.85, which amount has been paid to me by Appellants.

Witness my hand and the seal of the District Court of the United States for the Southern District of California this 15th day of December, A. D. 1941.

[Seal]

R. S. ZIMMERMAN,

Clerk,

By EDMUND L. SMITH,

Deputy. [53]

[Title of District Court and Cause.]

REPORTER'S TRANSCRIPT OF TESTIMONY  
AND PROCEEDINGS ON TRIAL

Appearances:

Avery M. Blount, Esq.,  
Herbert A. Huebner, Esq., and  
Kelly L. Taulbee, Esq.,  
For Plaintiffs.

William R. Litzenberg, Esq., and  
Irving S. Baltimore, Esq.,  
For Defendants.

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Los Angeles, California,  
Tuesday, April 30, 1940, 10 A. M.

The Court: The case of Lensch against Metallizing Company.

Mr. Huebner: The plaintiff is ready, your Honor.

Mr. Litzenberg: The defendant is ready.

The Court: You may proceed.

Mr. Blount: If your Honor please, with the permission of the court, at this time plaintiff desires to associate as counsel Mr. Herbert A. Huebner and also Mr. Kelly L. Taulbee.

The Court: The order may be made.

Mr. Huebner: In regard to the transcript, your Honor, counsel and I have not yet agreed upon what arrangement should be made. It appeared to me that the court will desire a copy, and plaintiff will desire a copy. Now, if the court does not desire a copy,

that presents a little different question, and I should like to inquire at this time about that.

The Court: Well, I make no condition as to that, except to say that if you, for instance, have a copy furnished you, that I would want to use that later. It is not going to be filed unless you so instruct, but I would like to have the use of it at the end of the case.

Mr. Huebner: It seems to me the proper way to handle this is to have the usual court's copy made, and any party [2\*] that desires a copy also order it, and my suggestion is that the parties join in paying the reporter's expense initially and in furnishing the court a copy, the cost of that to be eventually taxed, and that either party, if they desire, order their own copies. I personally would like to see it come through in the form of a daily.

Mr. Litzenberg: We have not felt that there was any need for a daily, and we have not felt that perhaps the court would have need for a daily transcript. And of course we want to avoid as much expense as possible. We came here with the idea that the daily record is all we would ask for at the present time and all that we would like to have taken.

Mr. Huebner: If that is the position of the defendants and they decline to join us in providing the court with a copy, the plaintiff will provide the court with a copy.

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\*Page numbering appearing at top of page of original Reporter's Transcript.

The Court: Which I will not allow the other side to use.

Mr. Litzenberg: That is understood.

The Court: If you say so, the copy of the transcript that you furnish me will not be allowed to be used by the other side, either here or afterwards.

Mr. Huebner: It seems to me that if we bear the expense, that should be the understanding.

The Court: That will be the understanding.

Mr. Litzenberg: And if we wish a copy on appeal it will be necessary, of course, for us to procure that. [3]

The Court: Yes. We can't say yet which side will appeal, of course.

Mr. Huebner: May I confer with counsel for a moment?

The Court: Yes.

Mr. Huebner: I am sorry to take your Honor's time, but this was unexpected. The plaintiff will desire one copy for the court and one copy for its own use, to be turned out in the form of a daily.

The Court: At the cost of the plaintiffs, for the present?

Mr. Huebner: That is, the plaintiff will advance the cost, and in the event costs are taxed, that the reporter's per diem and the cost of the court's copy will be taxable as costs.

The Court: The per diem will. Of course you have agreed as to that. Now, do you agree that the court's copy shall be taxed as costs?



Mr. Litzenberg: No, I don't think we will agree to that.

Mr. Huebner: Very well. We will stand it then.

The Court: The per diem is the only cost, then, that is to be taxed.

Mr. Huebner: Before proceeding to the merits, I should like to ask the court's permission to make a few very minor amendments in the complaint. They do not go to the substance, but they do go to form. For instance, the [4] complaint was entitled "Bill of Complaint," and I should like to correct that and call it just "Complaint." Any objection to that, Mr. Litzenberg?

Mr. Litzenberg: None at all. I called attention to it in my answer.

Mr. Huebner: And on page 2, in paragraph 4, line 27 of that page, there is an allegation that the plaintiffs Lensch and Leder were the first, original and sole inventors, whereas the patent shows, and it is a fact, that they were joint inventors, and I should like to change the word "sole" to "joint." Any objection to that? [5]

Mr. Litzenberg: That is agreeable.

Mr. Huebner: In the last line of page 4, there is an allegation of infringement within the District of California, and I should like to specify the Southern District of California.

The Court: Very well.

Mr. Huebner: On page 5, in line numbered 7, the allegation is that the defendants unlawfully manufactured or caused to be manufactured, and



used or caused to be used, and I should like to insert after the first comma in line 7 the words "sold or caused to be sold," so that the allegation will be in the usual form of manufacture or use or sale.

The Court: Very well.

Mr. Huebner: And a similar correction should be made in paragraph number 13 on page 5, in lines 27 and 28. There should be a comma after the word "make" and insert the word "sell" in each instance.

The Court: Very well.

Mr. Huebner: The original Letters Patent is offered in evidence, and leave is asked to substitute a printed copy.

The Court: That may be done.

Mr. Huebner: I have here an extra copy for the use of the court, which he may mark up at his pleasure.

The Clerk: Plaintiff's Exhibit No. 1.



PLAINTIFFS' EXHIBIT NO. 1

Lensch Patent No. 2,096,119

[Endorsed]: No. 201-J Civil. Lensch vs. Metal-  
lizing Co. Filed 4/30/40. R. S. Zimmerman, Clerk.  
By L. B. Figg, Deputy Clerk.

Oct. 19, 1937.

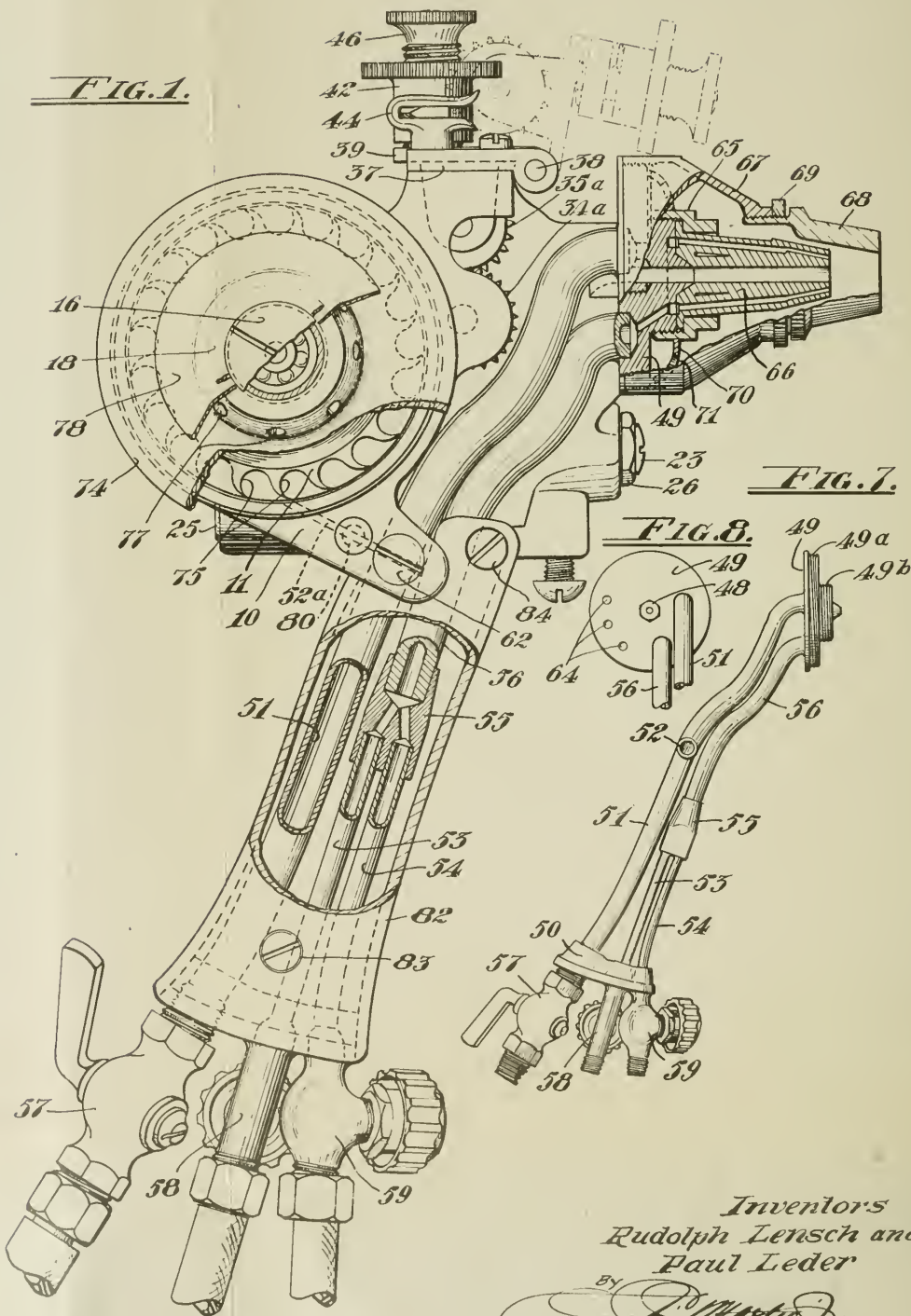
R. LENSCH ET AL

2,096,119

METAL SPRAY GUN

Filed April 13, 1936

3 Sheets-Sheet 1



Inventors  
Rudolph Lensch and  
Paul Leder

By *J. M. [Signature]*  
ATTORNEY



Oct. 19, 1937.

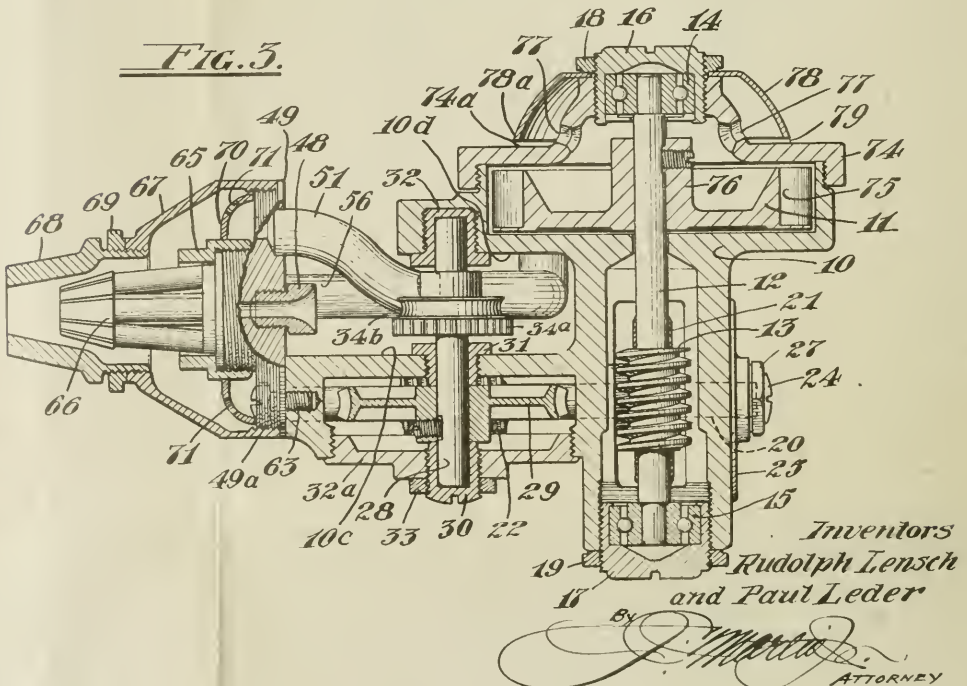
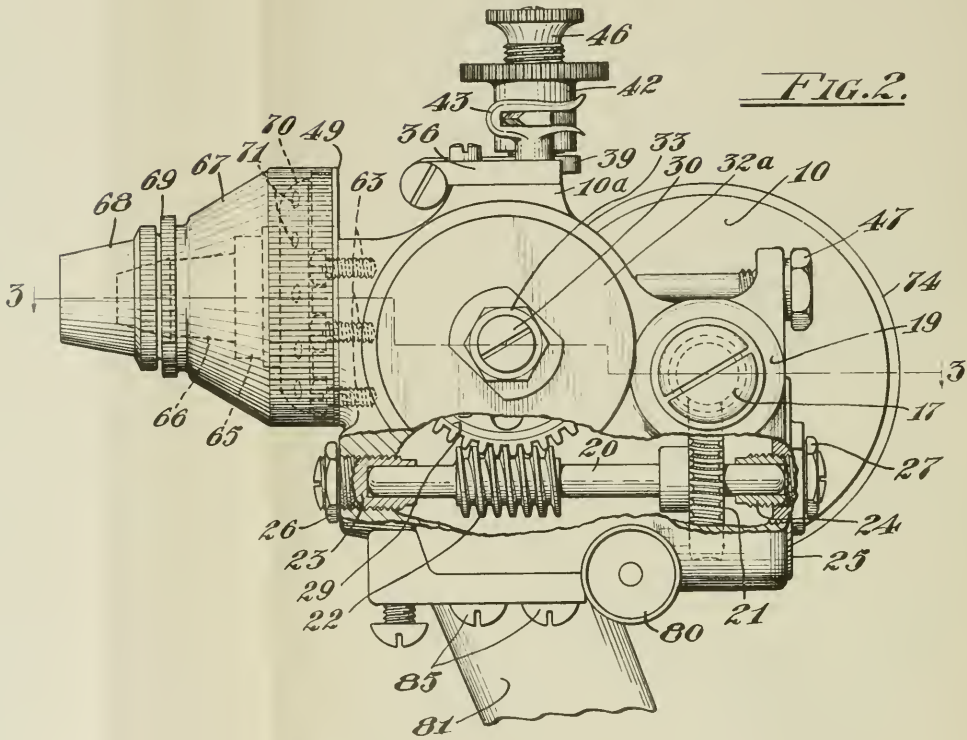
R. LENSCH ET AL

2,096,119

METAL SPRAY GUN

Filed April 13, 1936

3 Sheets-Sheet 2







Oct. 19, 1937.

R. LENSCH ET AL

2,096,119

METAL SPRAY GUN

Filed April 13, 1936

3 Sheets-Sheet 3

FIG. 4.

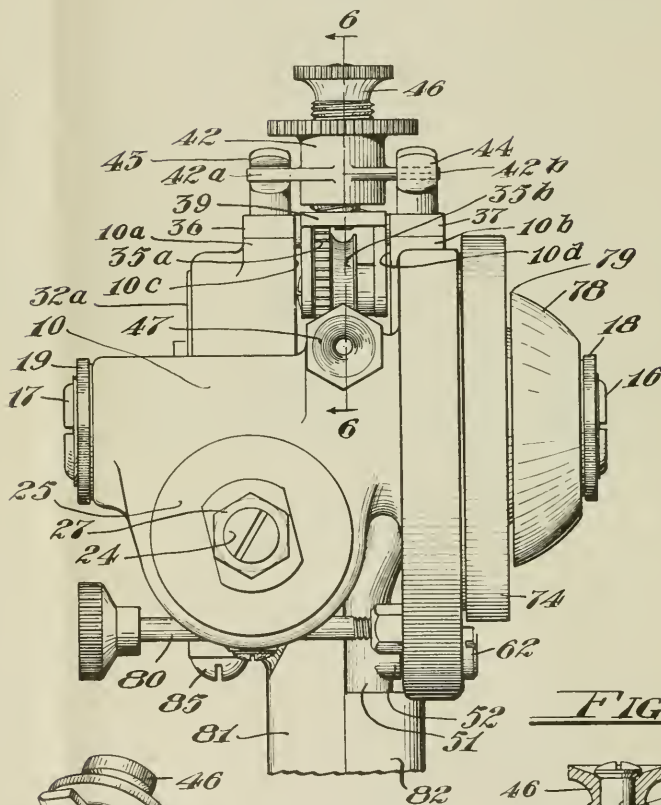
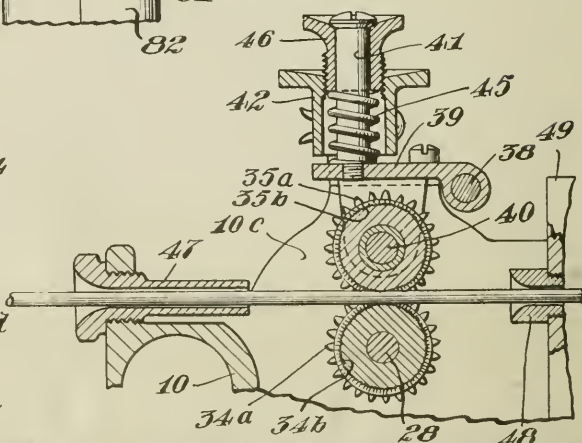
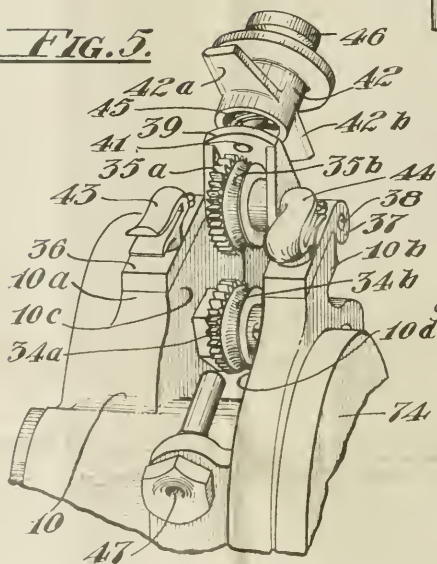


FIG. 6.

FIG. 5.



Inventors  
Rudolph Lensch and  
Paul Leder

By *[Signature]*  
ATTORNEY

## UNITED STATES PATENT OFFICE

2,096,119

## METAL SPRAY GUN

Rudolph Lensch, Los Angeles, and Paul Leder,  
Alhambra, Calif.

Application April 13, 1936, Serial No. 74,028

4 Claims. (Cl. 91—12.2)

The hereinafter described invention relates to the spraying of molten metal, being characterized by improvements in devices for this purpose, which devices utilize gaseous fuels for melting the metal as fed through them in wire form and fluid pressure for atomizing and depositing the molten metal against a base or part to be metal coated.

Among the objects of this invention is the provision of certain new and novel features and advantages beyond the improvements in Metal spraying devices as set out in United States Letters Patent granted to Rudolph Lensch and Paul Leder, January 8, 1935, No. 1,987,016.

One of the objects of the present invention is to provide an improved arrangement of controlling the wire fed through the gun whereby any desired pressure may be exerted on the wire in its passage through the wire feeding wheels, thereby better preventing slippage of the wire and effecting through the uniformity of its feed an improved quality of the molten metal deposition.

Another object of this invention is to provide a hinged latch construction whereby the top wire feeding wheel is releasably confined so that during wire feeding it can be set to engage the wire and after or during wire feeding can be unlatched and lifted on its hinged connection out of the way.

Another object of this invention is to increase the efficiency of the power plant as employed for driving the wire feeding mechanism of the gun through improvements, (1) in the turbine used as the prime mover, and (2) in the gearing of the transmission, the housing of the transmission and the manner of setting the transmission gearing in its bearings.

A further object of this invention is to form the combustion unit of the gun as a separate and distinct entity from the mechanical unit or power plant of the gun and to so provide conduits for carrying the fluid for atomizing the molten metal of the gun as well as the fuel for melting the metal that they will be contained in a single unit, one end of which terminates in a base to which the fuel nozzle of the gun is attached, and the opposite end of which terminates in the valve controlling means for the fluid pressure and fuel in its passage through the unit—thereby (1) condensing the space which these conduits occupy, eliminating joints subject to leakage and permitting of a construction of relatively light weight, and (2) making a construction for carrying fluid pressure and fuel which can be assembled in the gun as a

unit as well as replaced as a unit for expeditious repair.

Another object of this invention is to provide in a metal spray gun a casting as an integral part which will contain the housings for encompassing the gears of the transmission as well as the turbine for driving the transmission gears and to so form the casting that it will have a channel way for the wire feed, free and clear of the interiors of the gear and turbine housings.

Another object of our invention is to provide a new and novel way of handling the turbine exhaust, so that the exhaust will be expanded between the cover of the turbine and the turbine impeller and released through openings in the turbine cover, and after passing through these openings will be baffled to effect its discharge circumferentially, thereby effecting a greater efficiency of the turbine through the improved means of governing its exhaust.

A further object of this invention is to improve the efficiency of the combustion unit of the gun through the provision of a baffling arrangement whereby the fluid pressure for atomizing the molten metal will be better distributed around the molten metal in its discharge through the air cap at the end of the gun.

In order to more fully understand our invention reference should be made to the accompanying drawings, in which Fig. 1 is a side elevation with portions broken away and certain parts in section to better illustrate the improvements. Fig. 2 is a side elevation of the upper portion only of the structure of our invention, this view showing the side directly opposite the side of the elevation of Fig. 1. Fig. 3 is a sectional plan view taken on line 3—3, Fig. 2. Fig. 4 is a rear end elevation of the upper portion only of our improved structure. Fig. 5 is a broken perspective view of the wire feeding mechanism of our improvements. Fig. 6 also shows in sectional side elevation another view of the improved wire feeding arrangement of our structure taken on line 6—6, Fig. 4. Fig. 7 is a side elevation showing the combustion unit only of our improved gun structure, while Fig. 8 is a rear end view of the upper portion thereof.

Referring to the drawings:—Description will first be made of the power plant of our structure in which numeral 10 denotes the casting which 50 contains the chambers for housing the turbine 11, and the gear train cooperating therewith. Numeral 12 denotes the turbine shaft carrying the worm 13, this shaft being mounted in ball bearings 14 and 15. Ball bearings 14 and 15 are ad-



justably confined endwise by threaded containers 16 and 17 respectively. Containers 16 and 17 are locked in position after adjustment by lock nuts 18 and 19 respectively. Numeral 20 denotes a cross shaft substantially at right angles to turbine shaft 12. Shaft 20 carries a worm wheel 21 and a worm 22, and is mounted in bearings 23 and 24 at its opposite ends. The bearings 23 and 24 are aligned so as to bring the worm wheel 21 into meshed engagement with the worm 13 of turbine shaft 12. Shaft 20 is adjustably confined endwise through the threaded engagement of bearing 23 with casting 10 on the one end and through the threaded engagement of bearing 24 on the opposite end as provided in the gear chamber cover 25. Lock nuts 26 and 27 confine the bearings 23 and 24 respectively, in adjusted position. Numeral 28 denotes a shaft substantially at right angles to shaft 20. Shaft 28 carries a worm wheel 29, and is mounted in bearings 30, 31 and 32 so as to bring worm wheel 29 into meshed engagement with the worm 22 of shaft 20. Shaft 28 is adjustably confined endwise through the threaded engagement of bearing 30 as provided in the gear chamber cover 32a. A lock nut 33 confines the bearing 30 in adjusted position. Shaft 28, termed as the wire feed shaft, carries a wire feeding wheel comprising two portions, 34a and 34b. Portion 34a consists of a spur gear, while portion 34b consists of a grooved knurl wheel. Situated immediately over the wire feeding wheel of shaft 28 is another similar wire feeding wheel, comprising portions 35a and 35b. Portion 35a consists of a spur gear adapted to mesh with the spur gear 34a, while portion 35b consists of a knurled wheel adapted to cooperate with the knurled wheel 34b in the feeding of the wire through the gun as hereinafter described. The wire feeding wheels, comprised of the parts 34a—34b and 35a—35b are known as the lower and upper wire feeding wheels, respectively. The meshing of the gear portions of the wire feeding wheels is brought about only during the feeding of wire and through a new and novel arrangement of parts involving a latch device pivotally mounted in bearing plates 36 and 37 secured to lugs 10a and 10b of casting 10. The pivotal mounting is occasioned by a shaft 38 fitting bearings made in the plates 36 and 37. Shaft 38 carries a part 39, having depending portions containing bearings for carrying a shaft 40, upon which is mounted the upper wire feeding wheel 35a—35b. Secured to the top of part 39 by bolt 41 is a latch member 42 having wing portions 42a and 42b extending from its side. The member 42 is adapted to swivel on the bolt 41. Now, secured to the bearing plates 36 and 37, respectively, are two forked members 43 and 44. These forked members have open jaws, the jaws being set so that their open ends are opposed to each other. The jaws of members 43 and 44 are adapted to receive the wing portions 42a and 42b of latch member 42, the cooperating edges of the wings and jaws being beveled so that when the latch member 42 is swiveled in its connection a firm but releasably confined engagement of member 42 will be made in the jaws of members 43 and 44. In this latch construction it will be noted that the depending bearing portions of part 39 carrying the upper wire feeding wheel 35a—35b, are adapted to fit between the faces 10c and 10d of the main casting 10—a channel being formed between said faces of casting 10 to receive the part 39 when the latch member 42 is engaged in the forked jaws of members 43 and 44. At this time the gear portion 35a of the upper wire feeding

wheel and the gear portion 34a of the lower wire feeding wheel are brought into meshed engagement for the feeding of wire through the knurled portions 34b and 35b of the respective wire feeding wheels. A spring tension device is provided in the latch member 42 which gives the ability to the latch structure to adjust the pressure applied upon the wire in its feed through the knurled portions 34b and 35b of the lower and upper wire feeding wheels, respectively. This device comprises a spring 45 chambered in latch member 42, the upper end of member 42 being tapped to receive a spring tension adjusting screw 46.

In the drawings, Fig. 1, the latch device is shown in dotted lines swung up in the out of service position, that is, when no wire is being fed through the gun. By our improved structure the operator has a full vision of the wire, from the time of its entrance through the rear wire guide 47 and across the face of the knurled portion 34b of the lower wire feeding wheel into the front wire guide 48, before the latch member 42 is dropped down on its pivotal mounting into the channel way of the main casting 10 and its wings 42a and 42b are locked in wire feeding position in the jaws of members 43 and 44. The improved wire feeding arrangement of our structure including the latch device and channel between the sides 10c and 10d of main casting 10, for receiving the latch member 42 and upper wire feeding wheel as depended therefrom, is well shown in perspective view Fig. 5, while the sectional illustration of Fig. 6 shows the structure in functioning position during the feeding of wire.

Having described the wire feeding structure of our invention we will proceed with the description of the combustion unit thereof and in this connection reference is made particularly to Fig. 1, Figs. 7 and 8, in which Fig. 1 shows this unit assembled in place in the gun structure, and Fig. 7 shows the combustion unit formed as a separate entity ready for insertion into the gun assembly. Numeral 49 denotes the nozzle base member and numeral 50 the compressed air and fuel manifold member—these members forming the termini of the combustion unit. The compressed air used as the atomizing element for the molten metal and as power for driving the turbine of the power plant is carried by conduit 51, the threaded side outlet thereof, 52, being adapted to carry off a portion of the compressed air to the turbine impeller 11 through the passage 52a in main casting 10. Conduit 53 and conduit 54 carry respectively the oxygen and acetylene used as fuel. Conduit 53 and conduit 54 are united together by a combining chamber 55—out of which a conduit 56 leads these mixed gases. The lower ends of the conduits 51, 53 and 54 are made up in fluid tight joint engagement to manifold member 50, while the upper ends of the conduits 51 and 56 are similarly made up in joint engagement with nozzle base 49. In this structure a definite distance is maintained between the nozzle base 49 and the manifold 50 and the conduits 51, 53, 54 and 56 may all be removed and replaced in the gun assembly at one time. This makes for an efficiency in a metal spray gun not heretofore possible through the ability to expeditiously replace the combustion unit of the gun in the event of failure of the gaseous passages thereof. Numerals 57, 58 and 59 denote respectively the compressed air, oxygen and acetylene valves used for controlling the gaseous fluids of the combustion unit, the same being made up to manifold 50. Furthermore by our improved unit assembly of the fluid



carrying conduits of the gun, a more compact and simplified gun structure is effected.

In the assembly of the unit in the gun a hollow screw 62, tapped into casting 10, through which compressed air leads into passage 52a, together with the screws 63 passing through the hole 64 in nozzle base member 49 and fitting tapped holes in casting 10, hold the unit in releasably confined position in the gun assembly.

Nozzle base 49 is threaded at 49a and 49b, the thread 49b being adapted to receive a threaded union nut 65 holding the gun nozzle 66 in position. Encompassing nozzle 66 and secured to threaded end 49a of nozzle base 49 is air funnel 67. The smaller end of funnel 67 is adapted to receive the air cap 68 through threaded engagement between these respective parts. Lock nut 69 retains the air cap 68 in adjusted position in its threaded engagement with funnel 67. It will be noted that a baffle plate 70 is carried by the union nut 65. Baffle 70 is provided with a plurality of openings 71 through which the compressed air from the conduit 51 of the combustion unit is checked and deflected around the nozzle 66 and through the funnel 67 and air cap 68 in a highly efficient manner in effecting the atomization of the molten metal.

In the improved turbine structure of our invention numeral 11 denotes the turbine impeller as fixed to the turbine shaft 12. Main casting 10 is chambered to receive impeller 11, a threaded rim being provided on the impeller chamber to receive the threaded turbine cover 74. Turbine impeller 11 is provided with a cavity between the inner circumferential edge bounding its buckets 75 and its hub 76—this space providing what we choose to term the turbine impeller expansion chamber. Now in the turbine casing cover 74 and directly opposite the expansion chamber of impeller 11, is a chamber portion carrying a plurality of openings around it as denoted by numeral 77. Openings 77 are preferably of like size and inclined upwardly. Numeral 78 denotes a cup-like baffle secured to turbine cover 74 through the medium of lock nut 18 of the ball bearing container 16. Baffle 78 is set so as to provide a circumferentially extending slot 79 between its cupped edge 78a and the face 74a of turbine cover 74, thereby providing a free discharge for the air as exhausted from impeller 11 through the openings 77 of turbine casing cover 74.

From the foregoing description it will be clear that the air as exhausted from the buckets 75 of turbine impeller 11 is held a relatively long time between the chambered portions of the impeller and the turbine cover 74 before its final release to the atmosphere through the slot 79. During this time an expansion of the air is occasioned without creating undue back-pressure. By retaining the air exhausted from the turbine impeller in this manner we have found that the initial air introduced through the passage 52a against the buckets of the impeller is utilized with high efficiency and that a much less pressure of compressed air is required to drive the turbine impeller than heretofore used, for example in the turbine structure of our invention as covered by Letters Patent No. 1,987,016.

The compressed air through the passage 52a

as used for driving impeller 11 is controlled through needle valve 80.

The combustion unit of our structure is housed by the handle of the gun, the same being comprised of parts 81 and 82 removably confined by the screws 83, 84 and 85.

We desire it to be understood that reasonable modifications in the structural improvements of our invention, as shown by the illustrative embodiments herewith, may be made without departing from the spirit thereof and we therefore do not wish to restrict ourselves to the exact showing made, the scope of the invention being governed by the extent of the appended claims.

We claim:

1. In a metal spray gun, of the class described, in combination, a nozzle, a nozzle base, a union nut for securing said nozzle to the nozzle base, a baffle carried by said nut having a plurality of openings therethrough adapted to direct the flow of compressed air from said nozzle base, an air funnel encompassing said nozzle and baffle and an air cap secured to the end of said funnel.

2. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears, and wire feeding wheels, said member including housings for said turbine and gears and an open channel in its walls exteriorly of said housings, said wheels being adapted for rotation in said channel, a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having control valves and a nozzle base, a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit, and means including an abutment between the nozzle base and the walls of said member for releasably confining said units in operative association whereby said wire feeding wheels are visibly disposed in said channel.

3. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and a pair of wire feeding wheels, said member providing housings for said turbine and gears and having an open channel in its walls between said housings, one of said wire feeding wheels being mounted on a shaft extending from the transmission gears beyond the housing thereof and adapted to rotate in said channel, the other of said wire feeding wheels being pivotally mounted on said member and adapted for rotation in said channel, and means for holding the said wire feeding wheels in co-operative engagement during the feeding of wire.

4. A wire feeding mechanism for a metal spray gun comprising a member having a turbine, transmission gears, and a pair of wire feeding wheels, means for effecting the visible feed of wire through said wheels comprising: an open channel in the walls of said member between the turbine and gear housings thereof, a wire feeding wheel mounted between the sides of said channel and actuated by said transmission gears, a wire feeding wheel hingedly mounted on said member and adapted for rotation in said channel, and a spring latch for holding said hingedly mounted wire feeding wheel in engagement with said first wire feeding wheel during the feeding of wire.

RUDOLPH LENSCH.  
PAUL LEDER.





Mr. Litzenberg: Might it not be well at this time to [6] have it stipulated that regular printed copies and photostatic copies may be used in place of originals?

Mr. Huebner: Yes; that is agreeable.

The Court: Yes. [7]

Mr. Huebner: Referring to the enlargements on the blackboard of the three sheets of drawings in the patent in suit, this is Sheet No. 1, this Sheet 2 and this one Sheet 3. Without going into the details of the device, because the drawings [11] at first blush looks somewhat complicated, the structure of the patent is not at all complicated; and I will indicate in a general way the features which are interesting to the court.

Before proceeding to discuss it, Mr. Blount has suggested, and I think it is a wise suggestion, to offer in evidence these three enlarged drawings of the drawings of the patent in suit. In order to obtain the full benefit of the enlargements of the drawings, the upper part identifying the patent and the patent date and so forth are omitted, but I am sure Mr. Litzenberg, by comparison, can satisfy himself that these are correct photostats.

Mr. Litzenberg: There is no objection.

The Clerk: Plaintiff's Exhibits 2, 3 and 4. [12]

Mr. Huebner: I think if your Honor cared to examine one of the guns manufactured under the patent in suit, you would get a more comprehensive idea of the device. And I will offer in evidence one of the guns manufactured under the patent in suit.

The Clerk: Plaintiff's Exhibit No. 5. [15]

Mr. Huebner: Mr. Litzenberg, will you stipulate that this is a metallizer manufactured by the defendants?

Mr. Litzenberg: Yes.

Mr. Huebner: And do you stipulate that this drawing, which I have just hung up on the easel, is a true representation of the metallizer of the defendants? [23]

Mr. Litzenberg: It is the same.

Mr. Huebner: I offer in evidence, first, the metallizer gun.

The Clerk: Plaintiffs' Exhibit No. 6.

Mr. Huebner: And I next offer in evidence the enlarged drawing of the same gun.

The Clerk: Plaintiffs' Exhibit No. 7. [24]

Mr. Huebner: They manufactured that for awhile and, as often happens, when some new fellows come along and work hard and turn out a good proposition, the Metallizing Company of America seized upon the idea of the patent in suit, the metal spray guns that were on the market. The defendants seized upon the idea of the patent in suit and they put out a beautiful new gun which they called the Mogul. They advertised it up to the skies and they pointed out in their advertisements the very features which we stress in our patent and which are the essential features of the gun. Is there any doubt, Mr. Litzenberg, that this is the Mogul?

Mr. Litzenberg: I think not.

Mr. Huebner: And that it was manufactured by the [25] defendants subsequent to the granting of the patent and before the filing of suit?

Mr. Litzenberg: That is right.

Mr. Huebner: I offer it in evidence.

The Clerk: Plaintiffs' Exhibit No. 8.

Mr. Huebner: Will you also stipulate that this gun, Exhibit No. 8, the Mogul, was sold by the defendants to a party in Los Angeles?

Mr. Litzenberg: This particular one?

Mr. Huebner: You have sold guns identical to this in Los Angeles, haven't you?

Mr. Litzenberg: Yes.

Mr. Huebner: Mr. Litzenberg, here is a photo-static enlargement of your Mogul gun and I say this was taken from some of your advertising and literature. I want to point out to you that the first view has not been altered in any respect; that the lower view has not been altered except that we had our draftsman draw in some dotted lines in black ink. The dotted lines are intended to indicate some of the essential interior parts and that is the only alteration that has been made of the drawing. With that explanation, will you stipulate that this drawing illustrates the Mogul gun charged to infringe?

Mr. Litzenberg: It is a beautiful piece of work.

Mr. Huebner: And you so stipulate?

Mr. Litzenberg: Yes. [26]

Mr. Huebner: That will be offered in evidence.

The Clerk: Plaintiffs' Exhibit No. 9. [27]

Mr. Huebner: I have here a letter dated July 2, 1938, to the Metallizer Company of America, Inc., and Mr. L. E. Kunkler, president, signed by Mr. J. C. Martin, Jr., notifying those parties of the patent in suit and of their infringement. Will you stipulate that the defendants have had notice as of that date?

Mr. Litzenberg: We acknowledge receipt of it.

Mr. Huebner: Then I don't believe we will encumber the record with a full copy of the letter. I would like to ask Mr. Boyden if he will take the stand. [35]

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### CHARLES BOYDEN,

called as a witness in behalf of plaintiffs, being first duly sworn, testified as follows:

The Clerk: State your name, please.

A. Charles Boyden.

#### Direct Examination

Q. By Mr. Huebner: State your full name, Mr. Boyden.      A. Charles Boyden.

Q. Do you have a middle initial?

A. No initial.

Q. Where do you reside?      A. Glendale.

Q. California?      A. California.

Q. Do you care to give the reporter your street address?      A. 1227 South Central, Glendale.

Q. Are you an officer of the defendant corporation, Metallizing Company of America, Inc.?

(Testimony of Charles Boyden.)

A. Vice-president.

Q. What office do you hold?

A. Vice-president.

Q. How long have you occupied that office?

A. Since '32.

Q. 1932? A. Yes.

Q. Are you an engineer by profession? [36]

A. Just an engineer.

Q. You have followed that profession for some time, have you? A. Since '24, 1924.

Q. And have been engaged in the metal spray business for some time? A. Since 1929.

Q. Was that the date of your affiliation with the Metallizing Company of America?

A. It was then the Metallizing Company of Los Angeles.

Q. The predecessor of the present corporation?

A. Yes. It was changed over to the Metallizing Company of America in 1932.

Q. And since 1932 you have been vice-president of the Metallizing Company of America?

A. Yes.

Q. And that company has a place of business in Los Angeles, California? A. It has.

Q. Where spray guns of the type known as Mogul and the type known as Metallizer have been manufactured and sold? A. It has.

Q. I would like to show you an issue of The Metallizer, which appears to be a magazine. In



(Testimony of Charles Boyden.)

fact, let us save time and show you three issues, which I will identify. [37] The first one is the mid-winter, January, 1936, number. The second one is the February and March, 1936, number. The third one is the April and May, 1936, number. And the fourth one is the June and July issue of 1938. Will you please examine those magazines and state whether you know what they are?

A. Well, they are the Metallizer magazine.

Q. Have you personally had anything to do with their production?

A. No. I write some stories for them occasionally.

Q. You write some stories for them occasionally?

A. Yes.

Q. Do you get paid for the stories?

A. No.

Q. You contribute the articles free, do you?

A. Yes.

Q. Do you personally know whether those magazines came out on or about the dates which they bear?

A. Well, I presume so. I wouldn't know for sure about that.

Q. When did you first see these issues that I have shown you?

A. Well, I would not remember that either. That is a long time ago.

Mr. Huebner: I would like to have these marked for identification, and then interrogate the witness further. [38]



(Testimony of Charles Boyden.)

The Clerk: As one exhibit?

Mr. Huebner: As one exhibit, A, B, C and D. Distinguish them, if you will, please.

The Clerk: They will be Plaintiffs' Exhibits 10-A, -B, -C and -D.

Mr. Litzenberg: We are willing to admit that these publications——

Mr. Huebner: That they are what?

Mr. Litzenberg: Publications issued by the Metallizing Company.

Mr. Huebner: The defendant?

The Witness: The Metallizing Publishing Company,—the Metallizing Engineer Publishing, isn't it? It is on the top there, anyway.

Mr. Huebner: We will proceed to ask the witness some questions.

Q. By Mr. Huebner: Does the defendant, Metallizing Company of America, have or has it had at any time any business association with the publisher of this magazine, the Metallizing Engineering Publishing Company?

A. Mr. Kunkler is the president of our company, and he is also, I think—well, you will find his name at the top. Frankly, I don't know or don't remember. Let me take a look at it, and I can tell you. Well, I would say offhand it was Mr. Kunkler's company.

Q. That is, the publisher is Mr. Kunkler's company? [39]

A. Yes. I mean he owns the company.

(Testimony of Charles Boyden.)

Q. Do you know whether the Metallizing Engineering Publishing Company, which you say was Mr. Kunkler's company, is a fictitious firm name or is that a corporation?

A. I think it is a fictitious name.

Q. Under which he did business in publishing this magazine?      A. Yes.

Q. And at the time he did business under that fictitious name, that fictitious firm name, publishing this magazine, was he president of the defendant Metallizing Company of America, Inc?

A. Yes.

Q. Did you personally have anything to do with the publication of this magazine?

A. No. I just wrote stories for it occasionally.

Q. You knew, did you, that the company, Metallizing Company of America, was inserting advertisements from time to time in this magazine?

A. I did.

Q. Isn't it actually a fact, Mr. Boyden, that this magazine known as The Metallizer was really a house organ of the defendant The Metallizing Company of America, Inc.?

A. Well, it could be considered that.

Q. It was controlled by the defendant corporation, wasn't it? [40]

A. It was controlled by Mr. Kunkler.

Q. Wasn't it actually controlled by the defendant corporation?

A. No. It was a separate company. It was a

(Testimony of Charles Boyden.)

publishing company. In other words, I can explain it this way, that the bank account was separate from the Metallizing Company, if that means anything.

Q. But except for the separate bank account, it was simply one of the operations of the Metallizing Company of America, wasn't it?

A. You mean the promotion of the magazine?

Q. Yes.

A. It was put out to promote business.

Q. It was put out to promote business in spray guns manufactured by the Metallizing Company of America?

A. We naturally would favor the Metallizing Company of America's gun.

Mr. Litzenberg: You paid for the advertisements, did you not, your company?

A. Yes, our company paid for the advertisements.

Mr. Huebner: I think these are sufficiently established now to offer them in evidence. They were previously only marked for identification.

## PLAINTIFF'S EXHIBIT No. 10-a

### The Metallizer

The Official Organ of the International  
Metallizing Association

Midwinter Number    December, 1935-January, 1936

The Metallizing Company of America will soon have available in addition to their "Metallizer" gun

(Testimony of Charles Boyden.)

a new metal spray unit known as the "MOGUL." This piece of equipment has been designed and built with but one thought in mind: i.e., to offer to the public the finest piece of metal spraying equipment it is possible to produce today.

Possessing the same general characteristics as the well-known "Metallizer," certain features have been incorporated which make the "MOGUL" particularly adaptable to certain classes of severe service and there is little doubt that it will find a welcome in this respect.

Primarily the "gun" was intended for mounting in the tool post of a lathe to be used for machine element coating and for that reason no particular effort was made in the design to keep the weight at a minimum, but despite that, it is not too heavy to be used as a portable tool and will be available for that purpose as well as a lathe tool.

One feature worthy of note is that the wire feed mechanism and gas head, while attached to each other, are in reality separate units. This departure from the conventional reduces the replacement cost in case either assembly is damaged and furthermore permits of a better combination of metals being used for the construction of these parts.

The wire feed unit is self-contained and all the worms and gear-shafts are mounted on annular ball bearings and these assemblies run in a bath of fluid grease and are completely inclosed in a dust-proof case. The use of annular bearings insures permanent

(Testimony of Charles Boyden.)

alignment of the worms and gears and reduces to a minimum wear on these parts. The turbine has more power than is actually needed and runs at a slower speed than is found in equipment of this type and because of its proportions it will maintain a steady flow of power without continual adjustment. The various parts which enter the construction of this unit are made with a full appreciation of the service to which they will be subjected and it is needless to say that only the finest materials have been used.

The gas head is a bronze casting and the simultaneous control valve is of hard bronze. Splendid wearing qualities are assured through the use of this combination of materials and the valve will need very little attention. The gas and oxygen mixing is done in a metering tube which is so designed that there is little likelihood of flash back down the oxygen hose. A hardened steel wire guide tube is incorporated in the assembly so as to reduce wire wear in the parts of the front end.

The complete separation of the gas head and wire feed mechanism is an insurance against combustible gas mixtures working back into the inclosed gear case through gas mixing channels drilled in the gear case proper.

The thought behind the "MOGUL" has been to produce a metal spray unit which would stand up under severe service. A unit which would "stay put" and continue to perform without interruption;



(Testimony of Charles Boyden.)

in other words, a production tool. And that much has been accomplished.

The "MOGUL" gun does not replace the Metallizer gun but is a "high power" hand-built production tool.

"MOGUL" gun, Model "A" is for the production-spraying of steels, monel, and nickel.

"MOGUL" Gun, Model "B" is for the production-spraying of aluminum, bronzes, copper, and brass.

Page 16 The Metallizer—Midwinter, January, 1936

[Endorsed]: Plaintiff's Exhibit No. 10-a. Filed 4/30/40.

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## PLAINTIFF'S EXHIBIT No. 10-b

### The Metallizer

The Official Organ of the International  
Metallizing Association

February-March, 1936

## AN INTERVIEW WITH CHAS. BOYDEN

By V. M. Moynahan

Photo shows MOGUL Unit mounted on Lathe, spraying Stainless Steel on pump rod. Actual time check showed 10.2 lbs. sprayed in one hour. Smooth coating obtained.

[Photo omitted]

Since the event of the Mogul Metallizing Gun, the public has shown such inquisitive interest that



(Testimony of Charles Boyden.)

the writer decided to go over and pay a visit to the inventor of the tool which is causing such active comment. Mr. Charles Boyden of the Metallizing Co. of America Inc. is the gentleman responsible for this tremendous advancement in the metal spraying field.

He is a gentleman rather given to over conservatism than to exaggeration in his claims for any of the metallizing tools. However, after a few minutes with him, we discovered that the new mogul is absolutely everything that we have been hearing, and more. Its main virtue is its ability to spray hours upon end without the slightest attention from the man who is doing the job. It is mounted lighted and the rest is accomplished as though by magic. It doesn't overheat or vary in its continuous operation. Mr. Boyden's exact words seem to tell the story completely. The interview follows:

"The Mogul owes its existence to the continuous demand for a metal spraying unit which would give greater speed in spraying metals of comparatively high melting point and at the same time would require practically no attention in production work.

"Mechanically, there is little that need be said about the gun. The wire feed mechanism is built much like an automobile transmission with the shafts mounted in annular ball bearings and the complete gear assembly inclosed in a dirt

(Testimony of Charles Boyden.)

proof case packed with grease. This practically eliminates the necessity of greasing or oiling the mechanism and assures adequate lubrication at all times. Only the finest materials are used in the construction of the units because there are no limitations in manufacturing costs, the main idea being to manufacture something that would stay put and keep going and stand up under severe service.

“The melting and atomizing end of the gun, which is really the heart of any metal spraying unit, is not built along the conventional lines that most people are familiar with. The design is such that better mixing of the gases is accomplished and greater volumes are handled. To get increased spraying speed was no great problem, but to get this speed and still maintain a coating of fine texture, which is necessary for satisfactory results, and do this economically, required considerable time to work out. Getting unusual results in a *laboratory* and in the hands of the average *user* are entirely different things.

“The experimental Mogul was built about a year ago and for six months passed through the experimental stage. At the end of that time it was re-designed, certain additional features were incorporated, and it was ready for production. Jigs and fixtures were made. Plug, ring and thread gauges purchased so close manufacturing tolerances could be maintained. About a

(Testimony of Charles Boyden.)

month ago the first Moguls were ready for distribution.

“The Mogul is a high capacity gun. More than that it is an economical gun. We measure economy by the actual amount of money it takes to spray a pound of metal. We have been able to spray a pound of stainless steel using very slightly over four cu. ft. of acetylene and have sprayed 18-8 at better than ten pounds per hour. In fact, under ideal conditions we have reached nearer twelve pounds per hour. But we claim much less than this, to be sure that anyone can equal any claims we make. As I said before, certain things can be accomplished in the laboratory which probably will not be approximated in actual production service.

“A short time ago we started to develop ways and means of utilizing this high speed in connection with actual work. It was our desire to work out a method of coating a shaft or like piece in one transverse pass of the gun across the surface to be coated, putting on as much as  $\frac{1}{2}$ " in a single coat if necessary. We immediately ran into a snag, however, as we found such heavy deposits had a tendency to crack or check and especially with stainless steel. The coating was built up so rapidly that the heat could not be dissipated sufficiently fast and as the complete coating cooled, cracks appeared. This difficulty was overcome by means of an air blast,

(Testimony of Charles Boyden.)

blowing a stream of cold air on the coating as fast as the metal was applied so now the full capacity of the gun can be utilized to best advantage.

“I consider the Mogul the finest piece of metal spraying equipment ever built by anyone at any price. To see it in actual operation, one can appreciate the reason for such a bold statement. It has everything.”

Page 10      The Metallizer—February, March, 1936

[Endorsed]: Plaintiff's Exhibit No. 10-b. Filed 4/30/40.

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PLAINTIFF'S EXHIBIT No. 10-c

The Metallizer

The Official Organ of the International  
Metallizing Association

April-May 1936

COMPARE

A MASTERPIECE—the pinnacle of achievement—by the Metallizing Company of America, Inc., for the Metal Spraying Industry, the MOGUL Metallizer Gun—the ultimate in design, quality, precision and performance—FOOLPROOF.

Skillfully engineered, after giving sound and practical consideration to all phases and problems of the Metal Spray Gun Users, of this, and foreign

(Testimony of Charles Boyden.)

countries. Includes the suggestions from thousands of Metal Spray Equipment Users, desiring speed plus fineness of deposit:—a Gun that will operate hour after hour without adjustment, regardless of wire, regulators, gas adjustment, or experience of operator. The MOGUL, which has been put to every known scientific and practical test, is the most outstanding Metal Spray Gun for economical performance and mechanical perfection being built today. We GUARANTEE satisfaction. A demonstration and trial will prove our statements.

To operate a MOGUL one doesn't need to be a super-mechanic. Refinements in design and construction have eliminated customary metal spray gun troubles. Delicate adjustments are a thing of the past. The MOGUL is a tool for production purposes.

It is practically impossible to backfire the unit.

The MOGUL, like the Metallizer, uses the simultaneous valve control in which the gases and air are turned on and off in proper sequence and relation to each other. This eliminates the many adjustments found necessary in other equipment when starting and stopping the unit.

Words or Pictures cannot describe the MOGUL Gun—a metal spraying tool that thousands have asked for—POWERFUL, STEADY, RUGGED, DEPENDABLE. Regardless of the type of metal spraying unit you are now using—WIRE FOR A



(Testimony of Charles Boyden.)

**DEMONSTRATION—SEE THE MOGUL OPERATE IT.** You will then realize that words cannot describe this masterpiece.

You Will Want a Mogul

## **GAS HEAD**

This member is separate from the wire feed mechanism so there is no chance of gases getting into the gear case. The hard bronze taper valve is held tightly against its bronze seat by a spring thereby making unnecessary any delicate valve adjustment.

## **TURBINE ROTOR**

The rotor in the Mogul is large and powerful in excess of all requirements. Uniform wire feed is assured without constant adjustment. It is made of an aluminum alloy and is carefully balanced to insure smooth operation.

## **WIRE NOZZLE**

The wire nozzle is of one-piece construction and is made of copper to withstand high temperature oxidation and the wire hole has a hardened face to give a good wearing surface.

## **COUNTERSHAFT**

The countershaft as well as all the other shafts enclosed in the dirt-proof case are mounted on annular bearings. Perfect shaft alignment is maintained and freedom from bearing troubles assured.



(Testimony of Charles Boyden.)

## FEED SHAFT ASSEMBLY

This assembly is sturdily built and mounted on annular ball bearings. Every piece in the assembly with the exception of the bronze worm gear is made of steel, hardened and ground to size.

## MANUFACTURING TOLERANCES

Plug, Ring and Thread Gauges are used throughout to insure close manufacturing tolerances. Interchangeability of parts is thus assured. No expense has been spared in maintaining the highest possible standard of quality.

## METALLIZING COMPANY OF AMERICA INC.

General Offices

Eastern Office

1351 East 17th Street    11th Floor So. Ferry Bldg.,

Los Angeles, Calif.

New York, N. Y.

Midwestern Office

Houston Office

205 West Wacker Drive,    5746 Dorbrandt Street,  
Chicago, Ill.

Houston, Texas

Canadian Office

Export Office

McIntyre Bldg.,

44 Whitehall Street,

Victoria Sq.,

New York, N. Y.

Montreal, Canada

Cable (Rutowa)

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The Metallizer—April, May 1936

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[Endorsed]: Plaintiff's Exhibit No. 10-c. Filed  
4/30/40.

(Testimony of Charles Boyden.)

PLAINTIFF'S EXHIBIT No. 10-d

The Metallizer

The Official Organ of the International  
Metallizing Association

June-July Issue, 1938

COMPLETE PROCEDURE  
FOR  
A METALLIZING JOB USING  
THE MOGUL UNIT

Some drawings are included to which reference will be made. Before attempting any job the METALLIZER DATA MANUAL and the MOGUL INSTRUCTION MANUAL should be read thoroughly. The operator should acquaint himself with the MOGUL unit and it is suggested that he particularly study pages No. 2 and No. 3 in the Instruction Manual so that he will be acquainted with the wire feed mechanism and gas head. Although the unit is ready for operation when shipped, one should check the grease and relubricate the valve with the special valve lubricant in your MOGUL Box.

Before attempting any job, set up the equipment, light the gun, and practice obtaining the correct adjustment, using the various metals until the operator is very efficient in making the adjustments. How to light the gun and operate it is explained in the Mogul Instruction Manual on pages No. 6 to No. 9,

(Testimony of Charles Boyden.)

inclusive. Special care should be taken to study this section before attempting to light the unit.

After studying the above, set up the work in the lathe. Of course, any machinist can do this. Accuracy is not important within .005" unless the job is to be finished in the same set up. Some jobs such as cylinders, bearing retainers, pump housings, etc. are set up, machined, sprayed, and finished in one set up.

After setting up, one should take a cut across the work to clean it up, being sure to go deep enough to have at least  $1/32''$  on the radius to build up with sprayed metal. At times a cut of more than  $1/32''$  is necessary to level off worn spots but for normal applications  $1/32''$  thick to finished size is sufficient. (There are applications requiring no undercutting or clean-up cuts. This will be explained later.) After the clean-up cut the work should be undercut or dovetailed at each end (see Dia. B) to lock the sprayed metal in at the ends because it is impossible to get a good rough thread next to a shoulder. There is one exception. **DON'T UNDERCUT OR DOVE-TAIL ON A CRANK SHAFT FILLET.**

Page 2

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The next and most important step in spraying metal is preparation of the surface. The work must be kept clean and free of oil and moisture which might cause oxidation. The lathe should be run in back gear so the surface speed will be minimum as this helps in obtaining a well-shredded thread. The

(Testimony of Charles Boyden.)

carriage feed should be adjusted to equal 24 to 30 threads to the inch. The threading tool should be ground with every clearance exactly the opposite from a regular threading tool. (see Dia. A). This type of tool will tear the metal at the top and sides of the thread instead of cutting a clean thread. The tool must go deep enough into the work to tear out shavings in short fragments, turning them off to the right of the tool instead of curling to the left as is the case when cutting a good thread. If the tool leaves loose, torn pieces hanging to the threads, they must be knocked off with a square-nosed tool and the point of the threading tool raised just a fraction towards the center of the work to prevent this. (see Dia. C). If the tool cuts a clean thread, correct by dropping the point just a fraction. Be sure the tool is ground as described and if any keyways or oil holes are to be preserved, fill them with keystock or chalk before spraying, otherwise the sprayed metal will follow the contour of the work and fill in the keyway or oil hole. With high carbon steel it will be impossible to remill or drill these out.

The above procedure is followed in all cases except with cast iron which is more difficult to thread. For this 18 to 20 threads per inch are used. The threading tool should be a little more pointed, and the thread cut a little deeper so the cast iron thread breaks behind the tool without tearing. On cast iron work it is necessary to be sure that all oil is removed from the pores. This should be done by heating the

(Testimony of Charles Boyden.)

object sufficiently hot to draw or drive the oil out of the pores of the metal after which it can be wiped off with a rag.

Before attempting a job, practice the threading operation on scrap pieces until confident you can prepare a shaft satisfactorily. In Metallizing the proper preparation of the surface is of the **UT-MOST IMPORTANCE, SO WITHOUT FAIL, PRACTICE THREADING.**

To keep the work cool it is advisable to set up the auxiliary air blast on the back side of the carriage, and this will enable you to build up a  $\frac{1}{2}$ " coating, though most applications will not require this thickness. The work should be rotated as slowly as possible and the carriage set so the coating will be applied in one pass across the work. There is no set rule to determine this speed, it depends on the thickness desired and the speed at which the different metal wires melt. In time an operator will be able to judge these speeds quite accurately.

The kind of metal used will depend on the surface-hardness desired and the conditions under which the job will operate—that is, whether it will be subjected to corrosive action or abrasive pounding, whether the coating is for a press fit or subject to a sliding action such as a cylinder wall.

The choice of steel wires for metal spraying is well worth considerable study. The various elements of which steels are composed will influence their behavior in spraying and afterwards, although it is



(Testimony of Charles Boyden.)

recognized that the carbon content determines the finishing qualities and hardness. Wire having .25 carbon or less can be readily machined after spraying and should be used for building up lands on pistons and for other applications which will require machining. Steel wires of .25 carbon or less can be turned, milled or tapped without difficulty but tapping is not recommended as the tensile strength of sprayed coatings is very low. The higher carbon wires, from .25 to 1.20, are very hard to machine, even with carbide tools, and are not recommended unless the job can be finished by grinding. They have a very hard surface and are used for resistance to abrasion or for long surface wear on crank shaft journals, cylinder walls, piston skirts, etc. Stainless steel wires are sprayed for extreme corrosion or corrosion with abrasion. Two recommended steel wires for this purpose are: Stainless No. 1 of low carbon content and machinable. Stainless No. 2 of high carbon content and file-hard as sprayed. A recent development is TUFTON Wire, a high carbon, chromium steel which tends to harden after it has been in service. It can be machined immediately after spraying but after standing a few hours, it becomes so hard it can only be finished by grinding. It is corrosion and abrasion resistant and is supplied in  $\frac{1}{8}$ " diameter which cuts down the spraying time. Due to its machining qualities, completion of the job is speeded up, making it a very economical coating.

(Testimony of Charles Boyden.)

After a job is prepared it should be sprayed as soon as possible. Letting a job stand very long allows the air to oxidize the torn surface which will make a separation between the coating and the base material.

Hold the gun at an angle to fill in the dovetail, then straighten the gun. The normal spraying distance for this type of work is five inches, this distance being measured from the tip of the air cap to the surface being sprayed.

Before the gun is directed at the work all adjustments should have been made so that the metal is free from chunks as the atomizing takes place. Be sure enough metal is deposited so the work will finish at the desired diameter. This is important as it is much cheaper to put on a little too much metal than it is to do the whole job over as is necessary when not enough metal is applied. Check the job before finishing so you will be sure there is enough, usually 1/16" over the finish size, but if the coating is very rough, consideration must be given to the low spots.

The next step is to finish the work according to the requirements of the job. The three accepted ways to finish Metallized machine elements are: Preferably wet grinding; next dry grinding; and machining where the first two are impractical. After dry grinding, honing is recommended, and after machining a splendid finish can be obtained by using a fine cut mill file and abrasive cloth. This method

(Testimony of Charles Boyden.)

will produce a high polish hard to distinguish from grinding. When machining bronze or other alloys, a burnishing effect can be obtained by allowing the heel of the tool to drag. Of course, high carbon steel, high carbon stainless steel, and TUFTON after setting any length of time, must be ground finished. Low carbon steel, low carbon stainless steel, and TUFTON right after spraying may be machined. All alloys can be machined. It will be noticed that sprayed coatings machine similarly to hard, fine-grained castings. The rough cuts may be taken as fast as the tool bit will allow but the finish cuts should be very light to get the smoothest surface possible. Special grinding wheels are recommended for Metallized coatings to get the best results with minimum expense of replacing the wheels. Equally good results may be obtained by using any manufacturer's wheels conforming to the following specifications.

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Page 3

For general use, all types of surfaces, with dry grinder,

Carborundum Resinal, Silicon Carbide,  
Grit 50, Grade 12, Bond C 12 R-88.

Another good grade wheel for dry grinding all metals:

Sterling RC 303-K3E.

For wet grinding in the hard metal range:

C-54 Grain, K-55 Grade, Sterling Wheel.

(Testimony of Charles Boyden.)

Nearly all machine element jobs are prepared and sprayed according to the above procedure but for press fits we recommend the following: Sand blast the surface with a sharp, angular sand or steel grit and apply only a small amount of metal. If the operator is careful about applying only the required thickness, a small cut will finish or no finishing will be necessary. Jobs that cannot be put in a lathe to prepare them may be cleaned and roughened by sand blasting, then sprayed by hand, taking the same precautions for keeping the surface clean.

Preparing crank shafts is different from other jobs in that the fillet is not dovetailed, the surface is threaded about half way into the fillet so that when finished the wheel can regrind it with its round edge.

In spraying pistons we much prefer to only build up the skirt but if it is absolutely necessary to build up the lands we recommend cutting  $1/32''$  off the lands and the top of the side in order that the metal may be keyed in on the side. This is practical only when the lands are over  $1/2''$  wide. In preparing cast iron pistons one must remember the special threading instructions for this metal and that oil must be removed from the pores of the cast iron.

Occasionally a coating will crack or check, which may be due to several reasons:

1. Improper preparation;
2. Allowing work to get too hot.
3. Incorrect gas pressures.

(Testimony of Charles Boyden.)

The first can be cured by correcting your method of threading. The second can be taken care of by using the air blast at the back of the work to keep it cooler. And approximately 90% of such failures due to the third reason can be eliminated by correct gas adjustment.

The only way to know when the flame is "right" is to inspect the flame itself. Due to slight variations in the manufacture of metal spraying and associated equipment, it is quite impossible to specify exact gas pressures with any assurance that the flame will be NEUTRAL, therefore the pressures recommended by the equipment manufacturers can only be accepted as approximate and should be considered as such.

To correctly adjust the gases, the gun should be put in operation using the pressures recommended by the manufacturer. Next the oxygen pressure should be reduced until blue streamers are clearly visible in the fringe of the flame, after which the pressure should be increased until the white part of the flame shortens up, and the blue fringe streamers practically disappear. A correct flame can only be neutral when just sufficient oxygen is supplied, either from the tank or the air, to cause complete combustion of the gases and such a flame will give a maximum spraying speed comparable with a satisfactory metal structure.

An excess of acetylene in the gas mixture will cause less oxidation but, on the other hand, will



(Testimony of Charles Boyden.)

produce a coating that is coarse, soft, and spongy, which in many respects is less desirable than one having an excess of oxide. It will also reduce the spraying speed to a considerable extent so there is nothing to be gained in this direction.

Since the advent of the high speed spraying units the method of applying heavy coatings has changed considerably. Where it was formerly the practice to build up coatings in layers of thin coats it is now the custom to apply a continuous coating; *i. e.*, spray the coating to its full thickness in one pass of the spraying tool across the surface. A few years back it was not unusual to experience "layer separation" which was the result of excessive oxidation, whereas, today the same cause results in cracking or checking. While the results are different, the cause remains the same.

Unfortunately there are many operators who do not appreciate the value of precise adjustments when operating a metal spraying tool. Due to the method of spraying, there must be a perfect synchronization of the various factors which enter into the spraying operation. The flame must be exactly right as too much or too little oxygen will produce an unsatisfactory coating. Too fast a wire feed will cause the coating to be chunky whereas too slow a wire feed will not utilize the available calorific energy of the burning gases. An incorrect adjustment of the air cap will cause the coating to be rough in texture. So it becomes quite obvious that

(Testimony of Charles Boyden.)

a metal spraying unit can only work at maximum efficiency when all the adjustments are correctly made.

**DO NOT ATTEMPT A JOB UNLESS YOU  
KNOW EXACTLY HOW TO PROCEED!**

Get in touch with the factory by air mail, telegraph or telephone for advice. This service is free. They can give you the advantages of costly experience and save you a great deal of money by preventing failures due to your operator's lack of experience. Give the process a fair chance. Don't attempt to use the equipment as a cure-all. There are places where it won't work, just as there are repairs which cannot be made by welding. Do not attempt to fill in cracks or holes where tensile strength is required as in such cases it is necessary to weld.

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## WIRE RECOMMENDATIONS

From long experience in supplying Metallizing wires, we have found the following wires to be the proper metals for the service recommended:

$\frac{1}{8}$ " Tufton Wire—Specially made for Metallizing. Should be used for bearing surfaces, journals, pumps, etc. where medium to good lubrication is available. Must be ground finished.

1.20 Carbon Steel—For abrasion where no lubrication is present. Must be ground finished.

(Testimony of Charles Boyden.)

.25 Carbon Steel—Special steel wire developed for Metalspraying, readily machinable and less prone to crack.

Stainless Steel Metallizing #2—High Chrome—Has greater percentage of chrome than Tufton and recommended where corrosion is more severe. Must be ground.

1/8" M-25 Bronze, non-fuming—extremely tough and wear resisting.

Special Lead—A patented alloy lead far more resistant to corrosion than straight lead.

Page 4                      June-July, 1938—The Metallizer

[Endorsed]: Plaintiff's Exhibit No. 10-d. Filed 4/30/40.

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Q. By Mr. Huebner: Now, on page 16 of Exhibit 10-a there is a picture of a spray gun and some descriptive text. Is that a picture of the Mogul? [41]            A. It is.

Q. Does this text apply to the defendants' Mogul gun?            A. It does.

Q. Do you know who wrote this text?

A. I may have written it myself. I don't remember.

Q. Will you look at it and see if you can refresh your recollection?

Mr. Litzenberg: I think it is immaterial as to who wrote it.            A. I think I wrote that.

(Testimony of Charles Boyden.)

A. I would have said such a thing. Whether I said such a thing as that I don't know, but, in sum and substance, I would have, anyway.

Q. Did you actually give an interview with this V. M. Moynahan, or did you write that article?

A. I don't know. Frankly, I don't remember.

Q. Do you know V. M. Moynahan?

A. I do.

Q. Is that the same V. M. Moynahan who is listed here as editor of the *Metallizer* magazine?

A. It is.

Q. Did you know V. M. Moynahan at the time that this article was written?      A. I did.

Q. Do you deny the truth of any of the statements made in this article?      A. I do not.

Q. You don't deny the truth of any statement?

A. No. [44]/

Q. So that, whether you wrote it or didn't write it, or approved it or didn't approve it, it was true and correct?      A. It was.

Mr. Huebner: I would like to hand this up to the court.

Q. By Mr. Huebner: By the way, is V. M. Moynahan the true name of the person who purports to have written that article?

Mr. Litzenberg: We object to that as immaterial and having no bearing on the issues.

The Court: Well, it will identify the person. You may answer. Is that the true name of the person?

(Testimony of Charles Boyden.)

A. Well, it is the maiden name of the lady.

Q. It is actually Mrs. Kunkler, the wife of the president of the defendant corporation, isn't it?

A. It is.

Q. Here in Exhibit 10-c, on pages 8 and 9, is a two-page advertisement of the Metallizing Company of America, Inc. Was that an authorized ad?

A. It was.

Q. Are the statements that appear in this ad true and correct?        A. I would say so.

Q. If there is any doubt in your mind, please look at it, because I want a positive statement.

A. Well, I think they would be, because I don't think [45] we would have said something otherwise.

Q. Having reviewed the ad, are you prepared to state whether they are true and correct?

A. They are.

Mr. Huebner: I desire to call your Honor's attention to the following statement in this advertisement:

"To operate a Mogul one doesn't need to be a super-mechanic. Refinements in design and construction have eliminated the customary metal spray gun troubles. Delicate adjustments are a thing of the past. The Mogul is a tool for production purposes. It is practically impossible to backfire the unit."

Then under the title "Gas Head," it says:

"This member is separate from the wire feed mechanism so there is no chance of gases get-



(Testimony of Charles Boyden.)

ting into the gear case. The hard bronze taper valve is held tightly against its bronze seat by a spring thereby making unnecessary any delicate valve adjustment."

Now, on the back of The Metallizer, Exhibit 10-d, there is another ad.

Q. By Mr. Huebner: Was that authorized by the Metallizing Company of America?

A. I presume so.

Q. Is there any doubt about it?

A. Well, I presume Mr. Kunkler authorized the ad.

Q. Weren't you vice-president when the ad appeared? [46]?

A. Mr. Kunkler takes care of all the selling and the advertising and all that stuff.

Q. Just look at the ad and see whether the statements which appear in the ad are true and false, and testify, please, whether they are true or false.

A. The only thing there is, it is just a matter of opinion as to the first statement there about the number of guns sold.

Q. Will you read that statement and then explain your answer?

A. "The gun that is keeping lathes busy and adding profits to over 1500 machine shops."

Q. You say there is a doubt in your mind whether that is a true statement?

(Testimony of Charles Boyden.)

A. Well, that came up once before, whether that refers to that gun or the guns before it, the Metallizer, the Mogul gun, or the Metallizer and the Mogul gun, combined sales.

Q. Well, that sheet there doesn't say anything about the Metallizer, does it?      A. Not a thing.

Q. And that ad illustrates the Mogul?

A. Yes.

Q. And it identifies the Mogul by name?

A. It identifies the Mogul, yes.

Q. And it says at the top that this is the gun that is keeping 1500 plants busy, doesn't it? [47]

A. Yes.

Q. Do you still say that is false?

Q. I do, if that is specifically the Mogul gun. I didn't write the ad.

Q. What is false about it? In what respect is it false?

A. If it refers only to the Mogul in that 1500, then there was not 1500 guns sold.

Q. Your point is merely that there were not 1500 guns sold at the date this ad appeared; is that it?

A. That is what I am getting at, yes.

Q. There had been quite a large number sold, hadn't there?

A. There haven't been 1500 sold yet.

Q. There had been quite a substantial number sold at that date, hadn't there?

A. What is the date?

(Testimony of Charles Boyden.)

Q. The date is June and July of 1938.

A. Quite a few.

Mr. Huebner: I will hand this up to your Honor.

Q. By Mr. Huebner: Having shown your counsel first this little booklet entitled, "The Metalizing Instruction Manual," I would like you to examine it and state whether you know what it is.

A. I do.

Q. What is it? [48]

A. Instruction manual for the small gun, the Metallizer.

Q. The one I have referred to in my comments as the Metallizer gun?

A. The Metallizer, yes.

Q. And this manual was put out by the Metalizing Company of America in connection with the Metallizer gun?      A. It was.

Mr. Huebner: I offer this in evidence.

Mr. Litzenberg: It might be well to put the date in.

Mr. Huebner: I don't know anything about the date of it. You can bring that out on cross examination, if you want to. I don't know anything about the date of it.

The Clerk: Plaintiff's Exhibit No. 11.

Q. By Mr. Huebner: Now, are the statements contained in this Plaintiffs' Exhibit 11 all true and correct?      A. They are.

Mr. Huebner: I have at this time no particular pages to point out to your Honor. It is a discussion

(Testimony of Charles Boyden.)

of the use of the small Metallizer gun. Probably in argument or in my brief I will want to refer to parts of it.

The Court: Very well.

Q. By Mr. Huebner: Here is a little booklet entitled, "The Mogul Instruction Manual, Model A and B." What is that, if you know?

A. That is the instruction manual for the Mogul.

Q. And it was authorized by the defendant corporation? [49]

A. It was.

Q. And the statements in there are all true and correct?

A. Yes.

Mr. Huebner: I offer this in evidence.

The Clerk: Plaintiffs' Exhibit No. 12.

Q. By Mr. Huebner: And here is a Standard Mogul Spare Parts List. Have you seen that before?

A. I have.

Q. What is it?

A. It is just a parts list, the replacement cost, etc., of various parts.

Q. Of the Mogul gun? A. The Mogul.

Q. And the contents of this are all true and correct?

A. They are. I wrote it.

Mr. Huebner: I offer this in evidence.

The Clerk: Plaintiffs' Exhibit No. 13.

Mr. Huebner: I just want to read one or two pages from this Mogul Instruction Manual, Plaintiffs' Exhibit No. 12: "This assembly——" Speaking of the wire feed mechanism, which is what we in the patent have designated as the power unit; in

(Testimony of Charles Boyden.)

other words, the power unit of the patent and the wire feed mechanism of the Mogul gun are the same thing——

“This assembly consists of those parts contained in the aluminum case. Being a dirt-proof case completely enclosing the gearing, it is quite impossible to show the [50] assembly of the various members, but due to the simple arrangement of the parts a description will suffice.”

And then it goes on on page 2 to describe what they have designated as the wire feed mechanism, and what we call a power unit. And then under the heading “Gas Head Assembly”, it says:

“This assembly being more clearly shown consists of the gas head proper which attaches to the aluminum case with two screws.”

They have used the expression, “Gas head,” and we have in the patent called it power unit, and this goes on to describe on page 2 and page 3 the so-called gas head assembly, and I should like to direct your Honor’s particular attention to those passages on those pages. [51]

Q. By Mr. Huebner: Being an engineer, Mr. Boyden, I presume you are able to read drawings?

A. Yes.

Q. And you are thoroughly familiar with the construction of the Mogul gun, are you not?

A. Yes.

Q. You engineered it, I presume?



(Testimony of Charles Boyden.)

A. I designed it.

Q. Now having in mind the language of the instruction manual where the parts are designated, the gas head assembly and wire feed mechanism, would you indicate which of the constructions illustrated in this enlargement of the Mogul gun is the gas head assembly and which is the wire feeding assembly? I presume this is the gas head assembly?

A. That is the gas head assembly.

Q. And this is the wire feed assembly?

A. That is right.

Q. And this might properly be designated the combustion unit? A. Yes.

Q. And this might be properly designated, as a whole, the power unit? A. Power unit.

Q. Between the walls or the housing on the power unit, assuming that the housing for the turbine is one housing and that the housing for the gear is another part, and that there [52] are these walls as illustrated defining an opening or channel between those two housings, there is an opening or channel between them as illustrated, isn't there?

A. There is.

Q. And that communicates with the atmosphere as illustrated? A. Yes.

Q. And in that channel the wire feeding wheels operate as shown, do they not? A. Yes.

Q. And those wire feeding wheels are aligned, are they not, with a little wire guide, and said wire

(Testimony of Charles Boyden.)

guide is for directing and propelling the wire through the gun and into the nozzle for further operation?      A. That is right.

Q. And in the nozzle of the gun the melting occurs and the melted or molten metal is atomized and blasted by means of air pressure, is it not?

A. That is correct.

Q. The upper wire wheel in the Mogul gun is mounted on an axis or pivoted arm, isn't it, as shown?      A. Yes.

Q. And that may be thrown out of the way or put back into position in the manner I have just indicated with the pointer; is that correct?

A. That is correct. [53]

Mr. Litzenberg: If the court please, I fail to see where it is necessary to take the time of the court to go into things that are so mechanically obvious to anybody who understands anything about drawings at all. It seems to me we are consuming a great deal of time just preliminarily, in showing something that appears on the face of the drawing to be very, very obvious, and failing to get to the vital part of this case.

The Court: You might make a statement and counsel might agree that it is so, if it is not subject to dispute. Perhaps your description will be agreed to by him.

Mr. Huebner: I have almost finished with that phase of it, your Honor.

The Court: Very well.

(Testimony of Charles Boyden.)

Mr. Huebner: I gave counsel an opportunity a while ago to make any statement he wished in regard to infringement, and he said he contested it, so now I am attempting to establish the identity of the parts.

The Court: I thought possibly you might be able to agree as to the means of operation and the location of the parts with relation to each other, but he says he does not agree as to infringement.

Mr. Litzenberg: I didn't understand counsel, when he asked me then if we admitted infringement and I said no, to intimate that I should at that time make any kind of statement as to the grounds upon which we deny infringement. [54]

Mr. Huebner: I will proceed as rapidly as possible, unless your Honor directs me otherwise.

The Court: Very well.

Q. By Mr. Huebner: The lower wire wheel in the Mogul gun is mounted down deep in the channel, isn't it?

A. It is mounted just below the top.

Q. It is a continuation of the shaft I am indicating there, isn't it?      A. Yes.

Q. It goes straight through inside there?

A. Correct.

Q. And the lower one is driven by means of power derived from the turbine and communicated through gears onto the shaft of the wheel?

A. That is correct.

Q. And the upper wheel is an idler?

(Testimony of Charles Boyden.)

A. That is correct.

Q. And the tension of the upper wheel may be regulated by means of this spring and screw arrangement?

A. That is correct.

Q. The combustion unit or gas head of the Mogul gun is completely removable from the power unit or wire feeding assembly by removal of three screws, isn't it?

A. Two screws.

Q. Well, it is three screws in the patent and two screws on the Mogul gun. [55]

A. Well, we won't argue on that.

Q. And the part between what you call the gas head or combustion unit and the power unit or the wire feed assembly is that dark line in the lower section of the Mogul?

A. That is right.

Q. And this dark line represents a shoulder or abutment on the forward end of the power unit member or combined housing, doesn't it?

A. That is right.

Q. And the joint occurs between that forward shoulder or abutment and flush face at the rear part of the combustion unit, doesn't it?

A. Correct.

Q. Incidentally, Mr. Boyden, have you read the patent in suit?

A. Oh, yes.

Q. Are you familiar with its contents?

A. Practically backwards.

Q. And you also are familiar, I suppose, with the plaintiffs' commercial gun embodied in Exhibit 5?

A. Yes.

(Testimony of Charles Boyden.)

Q. In answering the last series of questions in regard to the structure of the Mogul gun, you were aware, were you not, that I was appropriating language from both the patent in suit and your own advertising literature, and using it synonymously, in several cases? [56]

A. I did.

Q. And when I spoke of the gas head assembly and the combustion unit I meant one and the same thing?

A. The same thing, yes.

Q. And when I spoke of the power unit and the wire feed assembly I meant one and the same thing?

A. Oh, yes.

Q. Both the gun of the patent in suit and the Mogul gun will operate to spray molten metal?

A. They will.

Q. Using the same kind of ammunition or wire?

A. Yes.

Q. And they both perform that function by the introduction of wires through a rear wire guide?

A. They do.

Q. And the ejection of the wire through a forward wire guide?

A. They both work the same.

Q. Maybe you are willing to admit they are identical in construction and in operation and in results?

A. I would say the results are the same and they operate very closely the same, and in structure there is some difference.



(Testimony of Charles Boyden.)

Q. What do you have in mind in regard to the difference in structure?

A. Well, the general set-up is altogether different. [57] They speak of the open channel and also the visible wire feed in that gun, in the metal spray gun, which is very visible. You can see it in any position.

Q. Well, I don't want to restrain you, Mr. Boyden, but——

A. What I am getting at is the difference. As far as the operation goes, it is exactly the same. This gun looks the same as the Mogul, the Metallizer works the same, the Metallizer Engineering Gun works the same. Fundamentally they all work the same. It was a basic design, originated along about 1912 or 1913.

Q. Well, let us confine these particular questions to a comparison of the patented gun and the Mogul. I don't want to confuse it by a reference in generalities to all previous guns. I stated in my opening statement that the process itself was not new.

A. That is true.

Q. We make no claim to the elements of the process. Let us refer more particularly or specifically to the gun of the patent and the Mogul gun. You concede that the patented gun and the Mogul gun operate in exactly the same way?

A. They do.

Q. To produce exactly the same results?

A. They do.

(Testimony of Charles Boyden.)

Q. And that the structure is just about the same, except that you observed some little differences?

[58]

A. That is right.

Q. I am asking you to point out to the court, if you will, and, if you desire, you may step down and refer to the drawings, what those differences are that you observed.

A. In this gun here the wire feeding in through the rear passes through the feed rolls and is visible in the feed roll. It seems quite important that it does so. I don't know just why, but nevertheless that is one of the claims. It can be seen from here or anywhere around the gun. In our gun you can't see it.

Q. Will you close that latch? And will you put some wire in it to demonstrate your point?

A. Where the wire passes between the feed rolls it can be seen. We call them wire rolls and you call them feed rolls. And here you can see them passing through. The wire can be seen passing through on the front and also the rear, the visible feed all through the feed rolls.

Q. How does that differ from the Mogul? Go on and explain that more in detail, please.

Mr. Litzenberg: That is a very important part, and I would like to have the witness continue.

The Court: If he has anything more to say about it, let him say so.

(Testimony of Charles Boyden.)

Mr. Blount: Counsel will have an opportunity to examine the witness on cross examination.

The Court: I know, but he can continue his explanation. [59]

Mr. Litzenberg: The court is referring to any further statement that you wish to make.

The Court: Did you fully answer the question, or is there something that you want to add about the wire that passes through?

A. That is one feature that is different in this gun.

Q. By Mr. Huebner: Is there any other feature that is different?

A. Well, just a difference in the arrangement of the parts, that is all. Outside of that, I don't see any great difference.

Q. When you speak of the arrangement——

A. For instance, our gas head was all up here; our combustion chamber was all up here. It was simply a matter of design, was all. Fundamentally they are all about the same.

Q. Now, you wanted to go on with the Mogul gun?

A. The wire, you cannot see it through between the feed rolls, in this position around here. I believe that is one of the patent claims. I don't know.

Mr. Litzenberg: Just go ahead and explain your machine. A. That is all there is to it.

Mr. Litzenberg: With regard to the features to which you have referred in the other exhibit.

(Testimony of Charles Boyden.)

The Court: He states that a view of the wire may be had in one, and he says it can't be seen in the other. [60]

A. It can't. That is one thing. As far as the rest of it goes, it is merely a matter of—well, this is the combustion unit here, and this is all combustion unit here, but that is all a matter of design. It don't amount to anything.

Q. By Mr. Huebner: It is not really a distinction—

A. No. This one swings back.

Q. That is one of the details of this part of the combustion unit, and this part is not a real distinction, is it?

A. No. It is just a matter of that we liked it this way, and the other gentlemen liked it better that way.

Q. You have pointed out that in the patented gun it is possible to view the wire from the rear as it is passing through the gun? A. Yes.

Q. And that in the Mogul gun the wire is not so visible from the rear as it is passing through?

A. No; it isn't visible at all.

Q. All right. Are there any other—I think you have answered that. I think you said that aside from that there is no other difference worth noting?

A. Nothing of importance.

Q. Now, if you take the Mogul gun and you hold it as I am holding it now and look down, you can see the wire, can't you?

(Testimony of Charles Boyden.)

A. I don't see it feed through the feed rolls. That is [61] the way it is specified.

Q. If you look in right there, can't you see the wire going into the feed rolls?

A. I don't know.

Mr. Huebner: I will show this to the court and ask the court to look at it.

A. I take that to mean when the wire passes through the feed roll.

Q. Looking from the left side of the gun, isn't it wholly possible to see the feed wire both at the rear part of the feed roll and the forward part of the feed roll as it is passing through the gun?

A. It can be seen at the rear, and also the front.

Q. Looking from the side of the gun, from the top of the gun?

A. Yes, or from the top of the gun, you see it in front.

Q. And from the side of the gun you can see both the front and rear of the feed rolls, can't you?

A. Here, yes.

Q. That is, from the side of the gun?

A. Yes, you can see the wire.

Q. Both places? A. Both places.

Q. Now, if any backfire occurs through the nozzle in the Mogul gun, it will be dissipated through the openings of the channel, won't it? [62]

A. In here?

Q. Yes, if any backfire comes back into here, it is going to exhaust into the air, isn't it?



(Testimony of Charles Boyden.)

A. Well, the backfire takes place down in the gas channels.

Q. So that if that happens, then you have to remove the combustion unit and put a new one on?

A. No.

Q. Or drill it out or clean it out? A. Yes.

Q. If any explosion, if any backfire does reach clear back into the open channel between these housings, it is exhausted, isn't it?

A. In here?

Q. Yes.

A. Well, it might flash a little bit.

Q. It wouldn't do any harm, would it?

A. It wouldn't do any harm, no.

Mr. Huebner: Your Honor, I probably am through with the witness, but I should like to look over my notes. Do you intend to adjourn during the noon hour?

The Court: Yes, I do. We will adjourn until 2 o'clock, gentlemen.

(Whereupon an adjournment was taken until 2 o'clock p. m. of this same day.) [63]

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Afternoon Session

2:00 o'clock

CHARLES BOYDEN

recalled.

Mr. Huebner: You may cross examine, Mr. Litzenberg.

(Testimony of Charles Boyden.)

### Cross Examination

Q. By Mr. Litzenberg: Mr. Boyden, I hand you Plaintiffs' Exhibit No. 5, which you described this morning, and will ask you to describe a little bit more in detail the openness which makes it possible to view the wire during the operation of the machine, that is, from all sides.

A. Let me take your pencil a minute. It is open all the way back here, a complete view of everything. It is open all the way around here, with a complete view in the front here, and the body of the gun here or, rather, the open channel so-called, is open on the top and the bottom and the rear and the side, completely open.

Q. Can the wire as it enters the wheels and as it emerges from the wheels be seen during the operation of the machine?      A. It can.

Q. I hand you the Mogul, Plaintiffs' Exhibit No. 8, and will ask you if it is possible to see the wire under the wheels and emerging from the wheels during the operation of this machine.

The Court: Use a wire in it. [64]

A. Well, in a normal operating position, no.

Q. By Mr. Litzenberg. You cannot see the wire as it enters between the feed wheels or as it emerges from the wheels as you would hold the machine in operation?      A. No.

Q. So that, if anything happened in connection with the wire being broken or crumpled, you would

(Testimony of Charles Boyden.)

not be able to see it during the operation of the machine?      A. No.

Q. I will refer to the large drawing, Plaintiffs' Exhibit No. 9, and call your attention to the lower figure and will ask you what makes it possible to see the daylight to which counsel referred on this drawing.

A. Well, they didn't have a grip on there or a tool post mounting on the bottom here. This member was not on or the other member that goes on there.

Q. So that this machine does not have the handle on it?      A. Yes; it does not.

Q. What other condition do you see in this machine which makes the visibility possible there which has been referred to?

A. Do you mean on this machine here?

Q. No; on this drawing.

A. Well, the feed roll is thrown back out of the way.

Q. The feed roll is thrown back in this figure, which makes it possible to see the feed gear and the feed wheel? [65]      A. Yes.

Q. That is not possible up here?      A. No.

Q. And, in order to see the feed wheels in the Mogul machine, it is necessary to lift the upper feed wheel and the pivoted lever back, is that correct?

A. Well, it is possible to see them but not normally in the normal operation of the spring.

(Testimony of Charles Boyden.)

Q. That is, you can, by peeking down in there, just see the edge of the lower wheel and you can see, of course, the upper wheel? A. Yes.

Q. But you could not see it or inspect it in that way under operation? A. No.

Q. Do you consider the visibility feature as of any importance in designing the Mogul machine?

A. No; otherwise, I would have opened it up so you could see it.

Q. Were you acquainted with any machine that was more similar to the Mogul machine than is Plaintiffs' Exhibit No. 5? In other words, if I make myself clear, prior to your designing of the Mogul machine, were you familiar with any other machine of this general type which was more similar to this machine, the Mogul, than it was similar to the plaintiffs' machine? [66]

Mr. Huebner: I object to that, your Honor, as calling for a conclusion. If he wishes the witness to identify some machines and testify as to their construction, he may do that.

The Court: He may answer generally first and then point to any details.

Q. By Mr. Litzenberg: Just answer it in a general way.

The Court: Answer it yes or no.

A. Yes.

Q. By Mr. Litzenberg: Can you state what that machine was?

A. The Societe Nouvelle de Metallization.

(Testimony of Charles Boyden.)

Mr. Huebner: May I suggest, your Honor, I personally have no objection to the defense material coming in at this stage of the proceedings but it might be somewhat confusing. I just call that to the attention of the court and raise the objection technically that it is not proper cross examination.

The Court: I shall have to sustain it on that ground. It is defensive.

Q. By Mr. Litzenberg: Referring now to Plaintiffs' Exhibit No. 7, which is a photostatic enlargement of the drawings, what machine is that?

A. The metallizer.

Q. That was one of the first machines you manufactured?

A. It was. [67]

Q. And that machine has feed rolls?

A. It does.

Q. And it has the power plant?

A. Yes.

Q. And it has the spring-held upper feed roll?

A. It does.

Q. For yieldingly holding the upper feed roll in connection with the wire?

A. It does.

Q. It has the gas plant or the vaporizing nozzle?

Mr. Blount: Your Honor, it seems to me this is quite leading, all of this.

The Court: He is cross examining your witness under the rule. We allow leading questions in that situation.

Q. By Mr. Litzenberg: In other words, your first machine had all of the fundamental elements used in most of these spray guns?



(Testimony of Charles Boyden.)

A. It did.

Q. And your Mogul machine was simply a further refinement of the machine shown in this drawing?

Mr. Huebner: That is objected to as calling for a conclusion of the witness, your Honor.

The Court: Yes; that does call for a conclusion of the witness unless he proceeds to particularize. The witness may generally give an answer, which in itself is a conclusion, if he immediately will show by particulars a [68] justification for it.

Mr. Litzenberg: I was going to have him state in what particulars.

The Court: Let him state.

Q. By Mr. Litzenberg: Will you please state, then, in what particulars you made the Mogul machine an improvement over this first machine or, in other words, the objections which you sought to overcome, if any, in this machine?

A. Well, the gears were housed in and ran in a bath of grease continually.

Q. You are referring to this drawing?

A. No. I mean the Mogul was different than that gun. And the shafts were all mounted in ball bearings. The gas head was separate to get away from aluminum. I wanted a bronze seat on my valve. The turbine was made larger to give more power. Aside from that, I don't know of any other particulars.

(Testimony of Charles Boyden.)

Q. Was there any advantage in the change which you made on the top?

A. I wouldn't say so. Do you mean as to whether you have a lid or whether you don't?

Q. Yes.

A. Nothing particularly. There is no advantage in seeing the feed rolls that I know of.

Q. When you spoke this morning in regard to the operation of the two machines, that is, the Mogul machine and [69] the plaintiffs' machine, of the operation being the same, I wish you would elaborate a little bit more upon that and point out if there are any differences in operation.

A. Well, in the fundamental operation of any metal spray gun that is using air for power and a wire gun using wire, I would say that they are all fundamentally the same and have been ever since along about 1910, 1911 or 1912 or in there, all of them.

Q. That is, as to the general fundamental function?

A. The function of the gun and the result produced.

Q. Would you say that there are any improvements in operation between your machine, the Mogul machine, and plaintiffs' machine, any details in the operation?

A. Well, that would only be drawing a conclusion on my part, that is all, as I see it.

Mr. Litzenberg: I guess that is all I will ask Mr. Boyden at this time.

(Testimony of Charles Boyden.)

Redirect Examination

Q. By Mr. Huebner: Mr. Boyden, the handle of the Mogul gun is hollow, isn't it?

A. It is supposed to be. It is where the core print comes out.

Q. What was that expression you used?

A. Core print.

Q. What is a core print?

A. Well, the handle is cast hollow and there is a core [70] goes up in there and it has to be supported at each end and that is where the core comes out.

Q. So the handle is hollow its full length?

A. The handle is hollow its full length but you can't see down through it its full length. Take a look.

Q. It is true, however, that the handle is hollow and that there is thus provided a communication between the atmosphere at the lower end of the handle and the interior of the open channel?

A. Yes; for no reason whatever, though.

Mr. Huebner: I move to strike the latter part of the witness' answer.

A. O.K.

The Court: Yes.

Q. By Mr. Huebner: You referred to a tool mounting, I believe.

A. That is the tool post mounting.

Q. And this little post here may be substituted

(Testimony of Charles Boyden.)

for the handle where you desire to use the gun on a lathe?      A. That is right.

Q. I call your attention to two holes which are drilled in that device. Those holes provide a communication, do they not, between the open channel and the atmosphere below the gun?

A. Oh, yes.

Mr. Huebner: I think that this tool post had better [71] be offered in evidence as a part of the accused gun.

The Court: It may be received.

Mr. Litzenberg: I would like to have him explain that communication.

Mr. Huebner: You will have a chance, Mr. Litzenberg.

The Clerk: Plaintiffs' Exhibit No. 8-A.

Q. By Mr. Huebner: You have pointed out a considerable change in the structure. You formerly manufactured the metallizer gun?      A. Yes.

Q. With some deficiencies which you conceded. And now you are manufacturing the Mogul?

A. Yes.

Q. Why did you change the design from the metallizer form to the Mogul form?

A. Well, so that—let me take the gun. The worms and gears in the metallizer in through here, which you can't see here, are all exposed. So they were housed in and they all run in a bath of grease so that they wore better. They are all mounted in ball bearings, that is, the shafts were so they

(Testimony of Charles Boyden.)

would be provided with gears, and the turbine was a little bit underpowered, if anything, on that gun. So I put a larger turbine in. And the taper valve was in the case and was seated in aluminum and there was considerable wear on the aluminum. So, to get away from that, I put the taper valve in a bronze casting here, [72] with the head separate. Otherwise, if I would have made the whole case of bronze, it would have been too heavy. In other words, I did the things I needed to do to get the results I wanted.

Q. For instance, why did you leave this open channel for the operation of the wire feed wheels between the housing for the turbine and the gear housing?

A. It was a perfectly logical way to do it and the way anybody would have done it. If I may have a metallizer, I will show you. The arrangements of the parts in this gun are exactly the same as they are in this gun. It is this way. In this gun there is a worm shaft comes across from the turbine over here into the bearing the same as it does here. [73] There is a countershaft that comes up underneath here in both guns exactly the same. The feed shaft goes across on this gun the same as it does on this gun. All it does is just house in those members. That is all there is to it and it is the logical thing to do. And it had been done anyway before.

Mr. Huebner: I move to strike that out, if your Honor please.



(Testimony of Charles Boyden.)

The Court: Yes; it may be stricken.

A. Okay. That will be introduced later.

Q. By Mr. Huebner: However, Mr. Boyden, in the Metallizer Gun there is no space between the gear train and the wire feeding wheels, whereas there is a substantial space in the Mogul, as is arranged for by the rather wide separation of the turbine housing and the gear housing. Now, wasn't there some reason for that?

A. Surely, there is a reason for that. I have got an annular bearing down in here. You can see it down in here. It is about three-eighths of an inch wide. So that would certainly mean moving it over that much.

Q. Why, then, in the Mogul did you move the housing for the turbine off the other way?

A. This way?

Q. Yes.

A. How does it come in here now?

Q. In the old gun it is flush and in the new gun it is [74] moved off to one side.

A. Suppose we take this wall and move it over here. Then we would have gotten the same result as here.

Q. I don't think that is quite clear.

A. Supposing we take this wall here and just jog it over here and bring it down in through here. Then we have the same result we have here. You will notice one thing, that this housing covers or screws around the outside and this screws around

(Testimony of Charles Boyden.)

on the inside to this member here. So, therefore, I have to move this wall over here so I can get the cover on, if that explains it to you or if you understand what I mean. It is just simply a different design. You do what you have to do to get certain results, is all.

Q. Do you get better and more satisfactory results by the Mogul than you do with the metallizer?

A. It is faster.

Q. What do you mean by that?

A. It sprays more metal in a given time.

Q. Is that the only advantage?

A. That is a sufficient advantage.

Q. What about these various advantages that were pointed out in the advertising literature. Don't those mean anything?

A. Why, surely. You get a longer lived gun running in a bath of oil. There is less wear on the worms and gears and bearings. [75]

Q. You give them the advantage of an oil bath in the Mogul, whereas, they had almost a dry lubrication in the metallizer, isn't that correct?

A. Well, except for a little grease.

Q. That is, you daubed a little grease on?

A. Yes.

Q. In the Mogul you have the advantage of segregating the wire wheels so that the fines do not foul the gears? That is right, isn't it?

A. That is true.

(Testimony of Charles Boyden.)

Q. Whereas, the fines did foul the gears in the metallizer, did they not?

A. Somewhat; not as much as would be thought, though.

Q. Now you have the advantage in the Mogul, do you not, of the open channel, which you do not have in the metallizer?

A. Well, what is the advantage?

Q. Don't you concede any advantage? If you don't concede any advantage, we won't discuss that point.

A. It is just simply the way the thing works out. Suppose I had carried this lid over here and completely closed it.

Q. You say, then, that there is no advantage in the presence of that open channel in the Mogul machine?

A. It has to be there due to the way the thing is designed. [76]

Q. But what I am asking you is is there an advantage or isn't there any advantage in that particular design of construction.

The Court: The open part.

A. No; I don't see any advantage.

Q. By Mr. Huebner: You don't?

A. No.

Q. Is there any advantage in making the gas head and the wire feeding mechanism of the Mogul in separate units?

(Testimony of Charles Boyden.)

A. There is for the reason I gave, that you can get an aluminum head and a bronze valve seat that stand up.

Q. I want to refer you to a statement in *The Metallizer*——

A. I know. You mean about the gas channels, don't you?

Q. What do you want to say about that?

A. I only know of one record, or we only have one record, of a gun that ever gave us any trouble in that respect and that was a gun that was being tested in our shop and the channel leaked and it blew a lid off of the gun.

Q. Here is a statement in *The Metallizer* Mid-winter issue for January, 1936: "The complete separation of the gas head and wire feed mechanism is an insurance against combustible gas mixtures working back into the enclosed gear case through gas mixing channels drilled in the gear case proper."

[77]

A. Well, that is true.

Q. There is another place I would like to call to your attention.

"One feature worthy of note is that the wire feed mechanism and gas head, while attached to each other, are in reality separate units. This departure from the conventional reduces the replacement cost in case either assembly is damaged——"

(Testimony of Charles Boyden.)

A. That is true.

Q. —“and furthermore permits of a better combination of metals being used for the construction of these parts.”

A. That is what I said about the aluminum head and the taper valve being of bronze; that it was a better combination of metals.

Q. In the Mogul gun, if there should be a backfire in the open channel, it would be harmlessly dissipated, wouldn't it?

A. Yes; that is very true. When there is an improper combination of gases here, there is a backfire goes down into the channel in here. Our mixing point is right about here on this gun. The gas comes in here and comes down here and this is the oxygen channel comes in here, and then the channel goes up to where it comes out of the front but the mixing takes place right in there. So there is no backfire that could—or a backfire couldn't go into the gun anyway. [78]

Q. Isn't it possible that in operation there may be a leakage of gas back through the bore into this area which is defined by the channel?

A. There could be a leakage; surely.

Q. All right. Let's distinguish between the backfire and the leakage. If there is a leakage back into this area here and it is ignited, the channel being open will allow the fire to dissipate in the air, won't it?

A. Surely.



(Testimony of Charles Boyden.)

Q. Without harm? A. Yes.

Q. Whereas, if this area were closed as it is in the metallizer and there was a leakage and accumulation of gas in the pocket here, there would be an explosion, wouldn't there? A. Probably.

Q. And has been to your knowledge, hasn't there?

A. In one case but not due to that condition. In the metallizer the explosion I referred to blew this lid off. There is a channel comes up in here and it was a defective casting that comes right up in there. As I say, it was a defective casting and, when the gun was closed, the gas leaked into the case and it blew up.

Q. Do you still manufacture and sell the metallizer? A. We do.

Q. At what retail price? [79]

A. Is that important?

Q. It is; yes.

Mr. Litzenberg: I object to that. I don't see any reason for that. That is immaterial at this time. A. \$350.

Q. By Mr. Huebner: And sometimes \$250, isn't it? A. We sell reconditioned guns for that.

Q. Don't you sell new conditioned metallizers sometimes for \$250?

A. We may possibly. I don't know. But that is the retail price, \$350.

Q. What is the retail price of the Mogul?

A. \$500. These guns are sold now for a certain

(Testimony of Charles Boyden.)

very fine coating that they give, finer than we can get with the other one.

Q. You consider the Mogul gun as your best product, don't you?      A. Oh, yes; surely.

Mr. Huebner: That is all.

Mr. Litzenberg: Just one or two questions.

[80]

Recross Examination

Q. By Mr. Litzenberg: Has any attempt been made to make these lids gas tight?      A. No.

Q. So there wasn't anything very unusual in the fact that that was blown open?      A. No.

Q. Would you consider the danger element in this gun of any consequence?

A. It was passed by the Board of Underwriters.

Q. This machine was passed by the Board of Underwriters?      A. Yes, sir.

Q. And is that true of this one?      A. Yes.

Q. So that they have both been passed by the Board of Underwriters?      A. Yes, sir.

Mr. Litzenberg: I think that is all.

The Witness: The little gun in 1935 and this one in 1936.

Mr. Huebner: That is all. If the court please, the plaintiff has under subpoena Mrs. Kunkler, and while I don't know the lady, I think she is present in court, and I desire to inform her at this time that her testimony will not be required, in view of Mr. Boyden's testimony, so that, so far as the plaintiff is concerned, she may be excused.

Call Mr. Udell. [81]

## GEORGE STANLEY UDELL,

called as a witness in behalf of plaintiffs, being first duly sworn, testified as follows:

## Direct Examination

Q. By Mr. Hnebner: Will you state your full name, please? A. George Stanley Udell.

Q. And your residence?

A. 3141 South Center Street, Arcadia.

Q. How long have you lived there, Mr. Udell?

A. Approximately 6 years.

Q. What is your business or occupation now?

A. Plumber.

Q. For whom do you work?

A. Belvedere Plumbing Company.

Q. Have you any interest in the litigation pending here in this court? A. No.

Q. You are not employed by either of the parties to the litigation, are you? A. I am not.

Q. Were you at any time employed by the Metal Spray Company? A. Yes, I was.

Q. And were you at any time employed by the Metallizing Company of America, Inc.? [82]

A. I was.

Q. Will you state to the court the approximate periods during which your employment occurred with these two concerns?

A. I was employed by the Metallizing Company of America from some time in 1933 until 1937.

Q. Then when did you go to the Metal Spray Company? A. In December of 1937.

(Testimony of George Stanley Udell.)

Q. Was there any period between those two employments when you were working elsewhere?

A. No. There was only about a week between the two.

Q. What was the occasion of your leaving the employment of the Metallizing Company of America and going to the Metal Spray Company?

A. Well, it was more or less a personal quarrel.

Q. Between yourself and somebody in the Metallizing Company?      A. Yes.

Q. How long did you stay with the Metal Spray Company?      A. Slightly over a year.

Q. And what was the occasion of your leaving that company?

A. Well, I would say several things; not sufficient work; not being able to accomplish the particular jobs I set out to do.

Q. During your period of employment in both of those companies what were you hired to do?

[83]

A. Well, with the Metallizing Company I was considered an operator, and also to work on guns, repairing them, and testing them for use, along with job work that was done in the shop. With the Metal Spray Company I did spraying in the shop, and sold equipment for them.

Q. In your work for those two companies did you operate the Metallizer gun?

A. Yes, I did.

Q. Did you operate the Mogul?

(Testimony of George Stanley Udell.)

A. Yes, I did.

Q. Did you operate the Metal Spray gun?

A. Yes.

Q. Exhibit 5?           A. Yes.

Q. When you say you were an operator, by that do you refer to demonstration of the guns, or did you work in the shop spraying metal?

A. I did both.

Q. Now, have you any personal observations to make in regard to the superiority or inferiority of, we will say, the Mogul gun over the Metallizer, based on——

Mr. Litzenberg: We object to that on the ground that no foundation has been laid to show that this man is an expert or is qualified to give expert opinion.

Mr. Huebner: He is not being interrogated, your Honor, as an expert, but as a practical man, a fact witness and [84] practical man in the field.

The Court: Are you familiar with the operation of each of the guns?

A. I am.

Q. And you have operated them many times yourself?           A. Yes.

The Court: Well, you can describe the differences in the operation and the effect of it, as you saw it.

A. Well, a Mogul gun is naturally a much nicer gun to operate than the Metallizer. It is more sure, and you know, when you are going to light the gun,



(Testimony of George Stanley Udell.)

you are more sure it is going to light and operate correctly, where, with the Metallizer, there is always some margin of doubt that something might not work as it was supposed to.

Q. Are you familiar with any instances where difficulty was encountered with the Metallizer?

A. What type of difficulty? What type of difficulty do you refer to?

Q. Well, backfire, or explosion, or some kind of uncalculated, unexpected firing.

A. Yes. You will find in any type of metal spray equipment there has been lots of cases where back-fire occurred.

Mr. Litzenberg: I believe the question was for a specific case.

A. I have a specific case in mind, if the court wishes, [85] where the gun backfired and blew the lid off, and other cases where, in the same shop, that could be named specifically, where the gun backfired, but no particular damage was done.

Q. By Mr. Huebner: Now, in that instance where the lid blew off, was any damage done to the gears in the case?

A. There was no damage done to the gears. However, the part that held the lid on was broken and let the lid fly off.

Q. Was there any injury to the operator of the gun?

A. No; the operator escaped any injury.

Q. How high in the air did the lid blow?

(Testimony of George Stanley Udell.)

A. Well, I would say maybe 15 feet.

Q. In your experience does that Metallizer gun allow accumulation of gases in the pocket at the lower part of the operating housing, operating unit housing?

A. Well, there is a chance that it could. However, I have never actually tested the guns to see if there were gases in there, but there is a possibility that they could, I suppose.

Q. Did you yourself, in your operations, observe any particular precautions with regard to the use of that Metallizer?

A. All operators were instructed to take precautions, that there must be wire in the gun before it is attempted to be lit. [86]

Q. Why is it necessary in the Metallizer to have wire in the gun before lighting it?

A. Because the passage that the wire travels through goes right back into the gear case, which is confined, and gas could go right back in there and cause an explosion.

Q. Is that same precaution necessary in the Mogul?      A. No, it is not.

Q. Is it necessary in the Metal Spray gun?

A. It is not.

Mr. Huebner: You may cross examine.

#### Cross Examination

Q. By Mr. Litzenberg: Mr. Udell, you heard Mr. Boyden's testimony, did you?      A. I did.

(Testimony of George Stanley Udell.)

Q. And the incident that he referred to, where the lid was blown open, is the same incident to which you referred?       A. That is right.

Mr. Litzenberg: That is all.

Mr. Huebner: That is all. Mr. Leder, will you please take the stand? [87]

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PAUL ALBERT ERNEST LEDER,

called as a witness in behalf of plaintiffs, being first duly sworn, testified as follows:

Direct Examination

Q. By Mr. Huebner: Please state your full name.       A. Paul Albert Ernest Leder.

Q. Where do you live, Mr. Leder?

A. Alhambra.

Q. And what is your address there?

A. 2508 Aurora Terrace, Alhambra.

Q. In what business or occupation are you engaged?

A. I am at present employed by the Metal Spray Company.

Q. How long have you been employed by them?

A. Since the beginning of—well, I have been employed periodically. The last time I was employed about April, 1937.

Q. You are one of the plaintiffs in this case, are you not?       A. I am.

(Testimony of Paul Albert Ernest Leder.)

Q. Are you one of the joint inventors or applicants of the patent in suit? A. Yes, sir.

Q. Do you and Mr. Lensch at the present time own the patent? A. Yes, sir.

Q. And have you owned the patent at all times since it [88] was issued? A. We have.

Q. Have you granted a license under the patent to the Metal Spray Company, to manufacture these guns? A. We have.

Q. And has the Metal Spray Company paid you a royalty on the guns manufactured and sold?

A. Yes, sir.

Q. Is Mr. Lensch present in court?

A. No.

Q. I understand that he is ill. Do you know anything about it?

A. Well, he claims he has a heart sickness and can't walk very far. He gets out of wind.

Q. Now, on the guns manufactured by the Metal Spray Company under their license with you, has there been any patent mark of any kind placed?

A. Every gun going out of the Metal Spray Company has been stamped with the patent number, since we have obtained the patent.

Q. Do you find that marking on the gun which is in evidence? A. It is marked there.

Q. What does it say there on the gun? [89]

A. Patent No. 176,632, and the following number is 1,987,016, and on this gun it says, "Other

(Testimony of Paul Albert Ernest Leder.)

patents pending.” In other words, this gun had been manufactured before the patent was issued.

Q. You were reading, I take it, from this little metal—— A. Name plate.

Q. ——name plate? A. Yes, sir.

Q. Somewhere else on this gun do you find the patent number of the patent in suit?

A. It is patent No. 2,098,119—2,096,119.

Q. And that was put on, was it——

A. It has been put on since we have obtained the patent from the Patent Office.

Q. Did you make any practice of recalling the guns, as far as possible, that had been sold previous to the patent, and putting the numbers on, and returning them to the owners?

A. We have tried to stamp every gun which we could get hold of.

Q. What is the retail selling price of the Metal Spray gun? A. \$500.

Q. Do *you about* how many of these have been sold? A. Well, I only can guess. [90]

Q. Well, I don't want you to guess, but if you know approximately how many that will be sufficient at the present time.

A. Well, I would say between 150 and 200.

Mr. Huebner: You may cross examine.

### Cross Examination

Q. By Mr. Litzenberg: Mr. Leder, referring to your first patent, 1,987,016, were you a joint inventor in connection with that invention?



(Testimony of Paul Albert Ernest Leder.)

A. That is right.

Q. How long after the manufacture of that machine was it before you worked out the improvement that is embodied in the later patent?

Mr. Huebner: Just a minute. That is objected to as having no foundation in the direct testimony. He didn't say he had ever manufactured this gun. And that is objectionable on several other grounds.

Mr. Litzenberg: They have referred to it and marked the guns being sold with the numbers of both of these patents, and therefore they are assuming that the gun which they are selling in the market is covered by the patent.

The Court: Let him answer first, why did you put the two numbers on the articles?

A. Well, I believe that this patent here, with some [91] features, like the nozzle, was patented, which is incorporated in the later patent, in the later model gun, and furthermore the passages of gases that comes right to the handle was patented in this case, and therefore I believe that the same features are incorporated in the other gun there, and therefore I put the patent numbers on there.

Q. Now then, my question was, how long after the making of your invention did you produce the one that you are now selling?

Mr. Huebner: I object to that on the ground that it is ambiguous. He says "produce." Does he mean invent, does he mean manufacture and sell, or what does he mean?

(Testimony of Paul Albert Ernest Leder.)

Mr. Litzenberg: It is very easily explained.

Q. By Mr. Litzenberg: How long after the manufacture of the first spray gun did you make one of these spray guns that you now sell?

Mr. Huebner: Just a minute. He hasn't testified that he manufactured any other gun.

The Court: Did you make any guns under the first patent?

A. We did.

The Court: And sell some?

A. Yes.

The Court: All right.

Q. By Mr. Litzenberg: When did you make your first ones under the second patent? [92]

A. During the time the guns were made under the first patent, Lensch and myself tried to improve the gun, and finally the construction of this gun was worked out.

Q. Approximately how long was it until you worked that out, from the time the first one was manufactured? A. The first one of these?

Q. Yes.

A. It is hard to say. It is a good many years ago.

Q. This patent was issued in 1935, January 8, 1935. A. Yes.

Q. Now, was it in 1935 or before or after that you worked out this improvement?

A. No. It was before 1935.

Q. It was before 1935? A. Yes.

(Testimony of Paul Albert Ernest Leder.)

Q. How long before?

A. It may be a month or a year before this time. It is pretty hard to say after this length of time has elapsed.

Q. You are not certain, then, as to how long after you completed the device for which you have the first patent that you perfected the invention of the second patent, that is, the one that you sell now?

A. Well, as to the perfection of it, that is a long—as far as I can see, I don't think any metal spray gun was perfect.

Q. I refer to the first machines of the type in the [93] second patent which you manufactured and sold, the very first ones, as disclosed there.

A. The first of those guns was finished somewhere around May, 1934.

Q. May of 1934?            A. Yes.

Q. Did you make any changes in it after that?

A. Since then we have made changes.

Q. In what respect? Would you please state briefly just what changes you have made?

A. We have changed the combustion unit. We have changed the top latch; we have changed the design of the feeding wheel, the wire feeding wheel, and a slight change has occurred in the design of the moving parts on the inside, the gear and shaft.

Q. But substantially it is the same machine that you made in May of 1934?

A. It has the same appearance.

Q. Does it have the same functions?

(Testimony of Paul Albert Ernest Leder.)

A. The same functions.

Q. Performing the same functions in substantially the same way?      A. Yes, sir.

Q. It has the separated power plate and the separated gas plate?      A. That is right. [94]

Q. Did it have the open channel, so that the feed of the wire was visible?      A. It had.

Q. And did it have the means for yieldingly holding the upper feed roll in contact with the wire?

A. Yes, sir.

Mr. Litzenberg: I think that is all.

#### Redirect Examination

Q. By Mr. Huebner: Mr. Leder, I just want to clear up this one point. I understand from your testimony on cross examination that the Metal Spray gun, plaintiffs' Exhibit 5, in all its essentials, was in your possession about May of 1934. Was that your statement?      A. That is right.

Q. And you weren't then talking about the earlier guns made under the other Lensch and Leder patent No. 1,987,016?      A. No.

Mr. Huebner: That is all. May it please the court, we have an expert witness who is prepared to describe to your Honor, if you please, the patent in suit, and make a comparison of elements of the patent in suit with the defendants' accused gun, the Mogul. I don't want to impose upon the court. We have prepared it and are ready to proceed along those lines, and if your Honor feels that it is not

(Testimony of Paul Albert Ernest Leder.)

necessary at this point to make that comparison we will act [95] accordingly and not put the witness on the stand.

The Court: Well, I think I understand the entire thing to date. If you want to go into that detail I am willing to hear this testimony. The difficulty is that expert testimony runs into a lot of space and sometimes does not do much good. On the other hand, I have heard counsel say that in the event of an appeal they want the expert testimony in the record. So I have no fault to find, unless you take too much time with the experts.

Mr. Huebner: In view of your Honor's comments, I think we will not put the witness on the stand. If it appears necessary, we can do so in rebuttal.

The Court: Very well.

Mr. Huebner: With that, the plaintiff rests.

The Court: We will have a short recess for about 10 minutes. We will adjourn at 4:30 this afternoon, gentlemen.

(Short recess.) [96]

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## DEFENSE

Mr. Litzenberg: If the court please, I have been a little bit surprised that Mr. Huebner would take so much of our time in describing the art and the general mechanisms in regard to spray guns, in



view of the history of the prosecution of the application on which the patent was issued, that is, the patent sued on. The practice of spraying metal on surfaces, of course, was invented a great many years ago, and the various means of accomplishing it were developed step by step, and a good many things were invented in foreign countries for accomplishing this, even before it came to the United States. So, as he said, the patent sued on is not a pioneer patent, but is a very secondary patent, and we have denied that it involves invention, what was accomplished over the prior art. We have denied that other than mechanical skill was required to produce the invention on which the patent was issued, especially in view of the teachings of the prior patents and the prior art, and particularly having in mind the applicants' own machine which they invented. And we have also denied, that is, we have also alleged that the machine which was finally patented was produced and was offered for sale and manufactured more than two years prior to the filing date of the patent, of the application on which the patent issued. And, as I have one or two witnesses who are very busy, and who wish to get away, and I wish to [97] finish with them this afternoon, I am going to present that defense at this time, and will call Mr. Britton.

Mr. Huebner: Just a minute. If your Honor please, if I understand counsel's statement correctly, he is proposing to show that there was prior

knowledge or use or sale of the patented invention. Is that correct?

Mr. Litzenberg: That is right. It was offered for sale more than two years prior to the filing of the application.

Mr. Huebner: By whom?

Mr. Litzenberg: By the applicants.

Mr. Huebner: Then I object, your Honor, to the introduction of any testimony or offer on that line, because such is not pleaded in the answer.

Mr. Litzenberg: I think if you will read the answer you will find that it was.

Mr. Huebner: But, Mr. Litzenberg, you have got to give us names and circumstances, in accordance with the statute. There is no notice whatsoever in the answer that this defense which he now sets up was going to be used as a defense in the case. There isn't the slightest hint there. The answer is in general terms and in ordinary form, and he proposed, according to the answer, to later submit dates and details, but he never did it.

Mr. Litzenberg: Under the new rules I think there is sufficient allegation to present the evidence that I am [98] proposing to submit at the present time. If you want to object to it at the time, that is all right.

Mr. Huebner: Well, I don't even want to launch into that phase of the defense, because I contend that, not having been pleaded, under the statute, and no notice having been given us, no evidence whatsoever relating to it can be offered.

Mr. Litzenberg: Well, I guess I will have to disagree with you on that. I guess it is for the court to rule. The answer, it seems to me, gives sufficient notice, sufficient warning, that that defense will be urged. Let me read that part of paragraph 4:

“Deny that they were entitled to a patent therefor under the provisions of the statutes of the United States, but admit that they made application on April 13th, 1936, to the Commissioner of Patents of the United States for letters patent for said alleged improvements, and deny that such alleged improvements were not known or used by others in this or any foreign country before their alleged invention or discovery thereof; and deny that said alleged improvements were not patented or described in any printed publication in this or any foreign country before their alleged invention or discovery thereof, or for more than two years prior to said alleged application for patent; and deny that said alleged improvements were not in public use or on sale in this country for more than two years prior to said alleged [99] application; and deny that said alleged invention had not been abandoned to the public.”

There is the allegation where we deny that it was not in public use or on sale in this country more than two years before the said alleged application.

And I contend that that is sufficient, under the new rules of procedure, to present evidence to show that they, even themselves, had it in public use and on sale more than two years prior to the application.

Mr. Huebner: That, your Honor, is a special defense, the denial of the affirmative of which in the answer never has been considered as setting up that as a special defense, and I submit that even under the new rules there is no waiver of that obligation on the part of the pleader.

The Court: I will be glad to hear you on it. The prior art that you claim to completely anticipate must be specifically pleaded, under the old rules. Whether under the new general rules a general denial will open the door I am not sure. I am not certain about that.

Mr. Huebner: I wasn't anticipating a debate on this point, and I have no authorities with me. If your Honor desires to have it briefed or argued, I am perfectly happy to do it.

The Court: I don't want to delay the trial.

Mr. Litzenberg: Perhaps we can pass this.

The Court: I would be inclined to allow an amendment [100] to specifically plead it and allow you to meet it, if counsel chooses to take that route and file an amendment. Then, if you choose to answer, I will allow that, within a few days.

Mr. Litzenberg: Well, if that is the only procedure under which this can be introduced, I certainly would appreciate it and would ask for that privilege.

The Court: I would suggest, then, that first you state particularly what you are expecting to prove, and then counsel on the other side may challenge it and meet that situation.

Mr. Litzenberg: We expect to introduce correspondence, letters, circular letters, that were sent out to the dealers, announcing the new machine, as early as April 5, 1934, the man who received the letter and the man who wrote the letter, and, in connection with the letter, the circular, bulletin No. 500, which was referred to in the letter, and which clearly shows the invention as we have it presented here as an exhibit. [101] Now, if this particular defense can be delayed, I am perfectly willing to go ahead and put on the other defense, leaving only this one particular phase of the defense, if that is permissible, for a later date.

The Court: Well, if it refers only to the sending out of the circular letter, possibly you can reach an understanding on that issue.

Mr. Huebner: Probably not, your Honor. However, I think that we should have further particulars in accordance with the requirement of the statute, as to who is alleged to have had that knowledge, and their addresses. I would like to be able to prepare to meet this unexpected defense.

Mr. Blount: And also time in which to do it.

The Court: That is the only special matter?

Mr. Litzenberg: Yes, that is the only special matter. The men are here in court at the present time, the sender, writer of the letter, and the man



who received the letter. And they are in the position of those who were offering these inventions to the public and sending out the bulletins which had been prepared for that purpose, and which definitely disclosed the invention that was made the subject matter of an application more than two years afterwards.

Mr. Huebner: I am asking you to state now, so that we can prepare to meet it, the name or names of individuals whom you say had this knowledge.

[102]

Mr. Litzenberg: Well, Mr. William M. Britton. Mr. Britton, will you give your address?

Mr. Britton: 1741 $\frac{1}{2}$  West 46th Street, Los Angeles.

Mr. Litzenberg: And Mr. H. B. Rice, the man who wrote the letter. Will you state your address, Mr. Rice?

Mr. Rice: 3835 Pine Street, Long Beach.

The Court: Those are all?

Mr. Litzenberg: Yes, sir.

Mr. Huebner: May I have the date of the letter and to whom it was addressed?

Mr. Litzenberg: Dated Los Angeles, California, April 5, 1934, subject, New Type Gun, addressed to all distributors and agents.

Mr. Huebner: Well, to whom did the particular letter go that you are intending to offer in evidence?

Mr. Litzenberg: It was mailed to Mr. Britton, who received it and had it in his possession. And

there was a personal note in longhand, written in ink, addressed by Mr. Rice to Mr. Britton, the letter being signed by Mr. Rice.

Mr. Huebner: That is the full extent of the material that you propose to offer on this special defense, is it?

Mr. Litzenberg: On that particular defense.

Mr. Huebner: Are there any other defenses that are not pleaded in the answer that you are going to offer?

Mr. Litzenberg: No; nothing but what has been specifically stated. [103]

Mr. Huebner: May I confer with my associates for a moment, your Honor?

The Court: Yes.

Mr. Huebner: Do you object to us looking at the letter, Mr. Litzenberg? I haven't seen the letter.

Mr. Litzenberg: No. I have a copy of it here that is a little easier to read. You may compare it if you wish.

(Short interim.)

Mr. Huebner: May it please the court, there is so much in this letter that we can't digest it in this brief space. I still think that we are entitled to the 30-day notice but I see no point in insisting or urging that upon the court. And I believe that, if we adjourn until day after tomorrow, that will give us an opportunity to look into it.

The Court: You may proceed with the other proof that you have.

Mr. Huebner: I should like to look over that letter at my leisure, if I may. You have an extra copy, have you?

Mr. Litzenberg: Yes. Then we might excuse Mr. Britton and Mr. Rice?

The Court: Yes. Shall I instruct them to return day after tomorrow morning?

Mr. Litzenberg: Yes; day after tomorrow morning. You may be excused until then, Mr. Britton and Mr. Rice. [104]

At this time I would like to introduce the file wrapper of the Lensch and Leder patent No. 2,096,119. [105]

I introduce this file wrapper and will ask that it be marked Defendants' Exhibit A.

[Clerk's Note: Defendant's Exhibit A is set forth at the end of Reporter's Transcript--page 380 of this printed record.]

I think at this time I will introduce some of the prior art, which I have cited in my answer, in order that it may be marked.

I would like, first, to introduce a French patent No. 741,740, a patent which was filed in November of 1931 and [109] which seems to have issued in December of 1932, in which there is a spray gun, shown in the drawings, with an open channel whereby the feed wheels are clearly shown, with the wire passing therebetween, with the motor and the feed mechanism in alignment with the nozzle through which the wire is fed. May that be marked?

The Clerk: Defendants' Exhibit B.

Mr. Litzenberg: I have a white copy of that, which we present, but I think the photostatic copy will be sufficient. If reference is desired to be made to the white copy, it may be a little clearer. Maybe I had better introduce the white copy instead of the photostat.

Mr. Huebner: Is there a translation attached to the copy?

Mr. Litzenberg: I have a translation here but I don't care particularly to make any particular use of the translation. I doubt very much if it adds to it. However, I will attach the translation as a part of the exhibit for whatever use it may have.

I next introduce a French patent No. 680,554, which was filed in December of 1928 and issued in January of 1930, in the drawings of which there is exhibited a metal spraying machine in which there is a housing, with a power plant in a separate compartment or housing, and a gas plant in another housing, with a chamber therebetween, with the feed wheels for feeding the wire through the machine and through [110] the nozzle.

Mr. Huebner: Is there a translation of that patent?

Mr. Litzenberg: I do not have a translation of that, Mr. Huebner.

Mr. Huebner: It seems to me that the court would require a translation.

The Court: Yes; I would like to have one for

the record in some way, either by a witness' testimony or otherwise.

Mr. Huebner: I, therefore, object to the introduction of the patent unless it is accompanied by a translation.

Mr. Litzenberg: The drawings, of course, are clear to mechanical men and our plan is to present witnesses to explain the drawings as shown in the French patents.

Mr. Huebner: The drawing is only a part of the patent and I submit the exhibit is not competent without a translation.

The Court: I think that is correct unless you call a witness who can translate it from the stand for the record. I will admit it provisionally and you may follow it up by further proof.

Mr. Litzenberg: Then, to save time, we will submit it at this time for identification.

The Court: Yes.

The Clerk: Defendants' Exhibit C for identification.

Mr. Litzenberg: Next, I will introduce French patent [111] No. 639,039 under the same provisions.

Mr. Huebner: That is, there is no translation accompanying it?

Mr. Litzenberg: There is no translation accompanying it.

Mr. Huebner: The same objection.

The Court: Yes; with the same understanding. It may be introduced for identification.



The Clerk: Defendants' Exhibit D for identification.

Mr. Litzenberg: Next, a British patent No. 440,-248, of 1934, convention date in Germany July 25, 1934, and application dated in the United Kingdom July 22, 1935, for an improvement in and relating to metal spray pistols. I will ask that that be marked.

The Clerk: Defendants' Exhibit E. Is that in evidence?

The Court: Yes.

Mr. Litzenberg: Also, British patent No. 268,-431, of 1927, also for an apparatus for applying coatings or deposits of fusible substances to surfaces.

The Clerk: Defendants' Exhibit F.

Mr. Litzenberg: Next, I will introduce United States patent No. 2,102,395, issued to Valentine on December 14, 1937.

The Clerk: Defendants' Exhibit G.

Mr. Litzenberg: The patent which was cited by the Patent Office, the patent issued to Irons, No. 1,917,523, of July 11, 1933, I offer in evidence. [112]

The Clerk: Defendants' Exhibit H.

Mr. Litzenberg: Next, a patent to Schoop No. 1,617,166, issued February 8, 1927, a device for coating articles with glass, enamel, quartz and metals.

The Clerk: Defendants' Exhibit I.

Mr. Litzenberg: I think I will also introduce a patent to Morf, which I have referred to, issued

February 9, 1915, No. 1,128,175, for a method of producing bodies or small particles of substances. This is one of the early patents issued in the United States in the development of this art and teaches much in regard to spraying or atomizing metals onto surfaces.

The Clerk: Defendants' Exhibit J.

Mr. Litzenberg: I think you did not introduce your first Leder patent, did you?

Mr. Huebner: No.

Mr. Litzenberg: I will also introduce the first patent to Lensch and Leder No. 1,987,016, issued January 8, 1935. This is the patent in regard to which Mr. Leder testified.

The Clerk: Defendants' Exhibit K.

Mr. Litzenberg: I will call Mr. Boyden. [113]

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### CHARLES BOYDEN,

recalled as a witness on behalf of defendants, having been heretofore duly sworn, testified as follows:

#### Direct Examination

Q. By Mr. Litzenberg: Mr. Boyden, you are one of the defendants in this suit?

A. Yes, sir.

Q. What is your present business?

A. Manufacturing metal spraying equipment.

Q. How long have you been engaged in the manufacturing of spraying equipment?

A. Eight years.

(Testimony of Charles Boyden.)

Q. Please give just a little history of your first experience and bring it up to date just briefly to save time.

A. Do you mean the metal spraying business?

Q. Yes.

A. Well, I started in in 1929 in a shop which was doing custom work only. I mean job shop work. And in 1931—or all through this time we were having a lot of trouble with the guns. They didn't operate properly. So we decided to make a gun of our own.

Q. You say "we".

A. Well, the company. So we brought out this gun here, this little metallizer gun. And at the same time we decided that we would put it on the market because the [114] patents were running out. I mean the gun patents were running out. They ran out in 1932. Anyway, we brought the gun out shortly after the patents ran out. And from then on it went along until in 1935, very early in 1935, when I started to get out the Mogul and then, in 1936, we brought it out for sale.

Q. When you refer to this gun you have reference to Plaintiffs' Exhibit No. 6?           A. Yes.

Q. Is this the one you picked up?

A. That is the metallizer. Did you give it a number here?

Q. Yes. Is that the one you started to manufacture?           A. That is the first one.

Q. In referring to it, it was not identified. But

(Testimony of Charles Boyden.)

you refer to the one marked Plaintiffs' Exhibit No. 6, do you?      A. Yes.

Q. Following that, you developed the Metallizer, or I mean the Mogul?

A. The Mogul came along about four years later.

Q. I am going to hand you what purports to be a spray gun and ask you if you have ever seen this before.      A. I have.

Q. Where did you first see that?

A. Oh, that was traded in for one of our other guns. It is a French gun, covered by the patents that are over [115] there, or one of the patents?

Q. You refer to French patent No. 680,554, do you?

Mr. Huebner: I object to this question unless this physical specimen of gun which the witness has is identified as to date and other circumstances.

Mr. Litzenberg: We will introduce all that we have in regard to this.

Mr. Huebner: But I am insisting upon and urging an objection.

The Court: He said it was traded in. They want to know when.

Mr. Litzenberg: I will develop that but I am developing that this patent is the same as this gun.

Q. Is it the same as that French patent?

A. Yes; it is. [116]

Mr. Huebner: That calls for a conclusion and

(Testimony of Charles Boyden.)

that is what I am objecting to. And I move to strike the witness' remarks.

Q. By the Court: Do you understand the internal mechanism of that model?

A. Yes, sir.

Q. And do the drawings in that patent represent what you understand to be the internal and external mechanism?

A. Yes, sir.

The Court: All right.

Q. By Mr. Litzenberg: Now, Mr. Boyden, I will ask you to just explain how this gun first came to your attention and how you came to come into possession of it and when that was.

A. Well, I don't know that. I don't know when we got the gun in but it was a trade-in from some company that was using this gun and bought one of our other guns, one of these guns.

Q. You refer to what?

A. Exhibit 6.

Q. The metallizer?

A. I am not sure but I think it was a firm down in Louisville, Kentucky, that makes toilet equipment. I think it was the American Sanitary Plumbing Company. Is there such a thing or the Sanitary Plumbing Company?

Q. We wouldn't know about that. Explain as nearly as [117] you can when this came into your possession.

A. I don't know, Mr. Litzenberg.

Q. Was it within a year or more?

A. Oh, no. It has just been a couple of years, two or three years.



(Testimony of Charles Boyden.)

Q. Did you have any representatives in foreign countries?

A. Well, we had an exporter that had representatives in foreign countries, Mr. Gossner.

Q. How did you get hold of this French patent?

A. Through him.

Q. He sent you a copy of the French patent?

A. He sent us copies of a number of French patents right after he took over our export business. He had his agents in Germany, France and Switzerland and around there to look up patent matters.

Q. In other words, he was selling the metallizer?

A. That was the gun he took on first.

Q. And he sent you these French patents which we have introduced today?

A. The patents that you have put in here, those foreign patents, were sent to me by Mr. Gossner.

Q. And he was your agent, selling your metallizer?      A. Yes. And he still is.

Mr. Huebner: I object to this line of examination as irrelevant and immaterial. It doesn't seem to touch on any issues, your Honor. [118]

Mr. Litzenberg: We feel, of course, it is very vital and I am not surprised that you object to it because we shall show that this French patent which was issued away back in 1930 and filed in 1928 is identical with this particular machine and that this particular machine has all of the mechanical elements embodied in your exhibits here, including a

(Testimony of Charles Boyden.)

separate chamber for the power plant and a separate chamber for the gas plant.

Mr. Huebner: But why all of the history of how he found it out and that he had an exporter there and got hold of the patents and all of that?

Mr. Litzenberg: Then, why all of the history in regard to the preliminaries in regard to the first presentation of this subject matter?

Mr. Blount: As to your assertions, Mr. Litzenberg, that it is the same, are you testifying as an expert or is that your opinion?

Mr. Litzenberg: I am doing just exactly what Mr. Huebner did in regard to the art.

Mr. Blount: We question the assertion and say that it is a conclusion on the part of counsel.

Mr. Litzenberg: I said we would show it.

The Court: Proceed. I don't believe that the fact history is important on that. You have the machine here and you have the patent.

A. Yes, sir. [119]

Q. By Mr. Litzenberg: Will you please explain this mechanism in your own language, Mr. Boyden, making as many comparisons of this structure that you hold in your hands as you can with the exhibits that are on the blackboard?

A. The turbine housing is here and in this side is a gear housing over here, the same as they have a gear housing. There is a channel in between the two here, the same as they have a channel. The shaft projects from the gear housing through and

(Testimony of Charles Boyden.)

carries the feed rolls and gears. Those are the principal things.

Q. And about the gas, what about the gas?

A. Well, there is nothing about that. This is just a valve here.

Q. It has the nozzle and all the rest of it?

A. Yes.

Q. Then, describe all of the rest of it.

A. It has the gas head. The gas channels are in the case here. This gas head comes off where the mixing takes place and it has the air cap and wire nozzle.

Q. Had it a pivoted feed wheel?

A. Well, I guess it would be considered a pivoted feed wheel and a pressure plunger here to cause engagement.

Q. What other features would you say are similar to the gun of the patent in suit?

A. That is about all there is. The housings here are separate. There is a passageway in between or channel, [120] if you want to call it that.

Q. Are the feed wheels visible during the operation of the machine?      A. No.

Q. In order to inspect the feed wheels and the wire as it is fed through the wheels, you must stop the machine, open the cover and inspect it, is that right?

A. Yes; I would think so, if you want to give a good inspection.

(Testimony of Charles Boyden.)

Q. And did you have that machine in your possession, that is, did you have this machine, the French machine, in your possession and have knowledge of it before the development of the Mogul?

A. No.

Q. Did you have any knowledge of it?

A. Oh, I had the patents on it.

Q. You had the patents on it? A. Yes.

Q. But you did not have the machine?

A. No.

Q. Did you get any ideas from the French patent, sent to you by your agent, which in any way contributed to your development of the Mogul?

A. Some; yes.

Q. I wish you would make comparison of any features which you found in the French patent.

[121]

A. Well, the housings are housed in here. I mean the worms and gears in here are all housed in, which is the principal thing that I was interested in.

Q. I notice that your main casting is very much like the drawings, that is, it is closed on practically all sides. A. Yes.

Q. That was somewhat different from the Metallizer. Now, in the development of the Mogul machine, how did it come that you did not use the closure or lid on which the upper feed wheel was supported but, instead, adopted a lever such as you have in the Mogul? Is there anything in connec-

(Testimony of Charles Boyden.)

tion with that development which you can explain at this time?

A. Well, there is no reason to put a lid over it. There is nothing gained.

Q. Is there a reason for not doing it?

A. Well, I wouldn't say there is any reason for not doing it, either.

Q. You didn't have in mind an effort to make visible the mechanism in the channel between the power plant and the gas plant? A. No.

Mr. Huebner: Just a minute. That is objected to as leading.

The Court: He may answer whether that was one of his objects. [122]

A. No; that was no object at all. You might say here, now, why didn't I hood this on over here so I couldn't see the gears. What is to be gained by doing it? And what is to be gained by looking at the gears?

Q. By Mr. Litzenberg: It is practically impossible for you to inspect the feed wheels and the feed gears and the wire within the channel during the operation of the Mogul gun, is that correct?

A. Well, unless you get in some twisted-around position there.

Q. I mean in practical, normal operation.

A. Oh, no; you couldn't see it.

Q. It never was intended? A. No.

Q. And, in order to even see one of the lower wheels, you would have to shut off the gun and look



(Testimony of Charles Boyden.)

closely and twist it around, as we have to do as we handle it in its present condition?      A. Yes.

Q. In the French gun is there any vent opening for prevention of accumulation of gas?

A. Well, nothing except this here.

Q. You refer to the latch opening?

A. The latch opening; yes.

Q. That would ventilate the chamber?

A. A little bit; not much. [123]

Q. Mr. Boyden, I show you the Valentine patent, Defendants' Exhibit G, and will ask you to explain what you find in the drawings of this patent corresponding to the mechanical elements of the Mogul machine.

A. Well, about the only thing is the gas head which appears to be removable. I mean this part here, from here out. That is hatched differently in here. That comes in here and around here and that is all removable from the case part.

Q. In other words, the gas head is shown to be removable or detachable?      A. Yes.

Q. Has that a spring-pressed upper feed roll?

A. Yes.

Q. And the rear wire guide is in alignment with the feed wheels and with the nozzle?      A. It is.

Q. And it has a power plant?

A. Well, this appears to be driven from an outside source somewhere.

Q. Trace it.

(Testimony of Charles Boyden.)

A. Here is the worm and gear here and a flexible shaft, it looks like to me, although I don't know. It would appear that way. The power plant is not incorporated in the gun.

Q. But it has the worm and gear drive in the housing? [124] A. That is right.

Q. And the drive gears for the two shafts which drive the wire guides? A. Yes.

Q. Did you have any particular knowledge of plaintiffs' device, Exhibit No. 5, in its present condition prior to or about the time you developed or worked on your Mogul machine?

A. I knew they had a gun. I had seen circulars of it.

Q. You had seen circulars of it? A. Yes.

Q. Had you made any study of the general art of spray guns in the way of textbooks or matter other than the patents which had been sent to you by your foreign agent?

A. No. There were no textbooks out.

Q. Is there any feature in regard to the matter of balance in your device that is any different from the plaintiffs' machine, that is not found in any of the other patents or other inventions?

A. Well, simply the balance in the end that they refer to. I am not sure whether it is a retiring position or what it is.

Q. In other words, the feature is that the power plant is on one side and the gas plant is on the other side? A. No.

(Testimony of Charles Boyden.)

Q. On opposite sides of the channel! [125]

A. No. The power plant is here and the transmission is over here and the worms and gears. This is your gas plant up here.

Q. In other words, it is balanced? A. Yes.

Q. The object in carrying the shafts through the channel to the opposite side is for the purpose of balancing the machine as it is held in the hand, is that right?

A. Well, no. Do you mean that you carry this out here a distance to get a balance?

Q. The general construction of this gives you a balanced machine, does it not? A. Yes.

Q. Which it would not if you had the drive connected up on the same side of the turbine! It wouldn't be balanced in the same way!

A. Do you mean if this was off to one side or moved over here somewheres?

Q. Yes. A. Oh, no.

Q. In other words, that is simply good mechanical construction, is what I am getting at?

A. Well, it is the way it was constructed. [126]

Mr. Litzenberg: I think I will let counsel take the witness at this time. [128]

(Testimony of Charles Boyden.)

Los Angeles, California,  
Thursday, May 2, 1940, 10 A. M.

(Parties present as before.)

The Clerk: Lensch vs. Metallizer.

Mr. Huebner: Ready.

Mr. Litzenberg: Ready. If the court please, in regard to the amendment to the answer, I have prepared that. I don't know whether the court has given thought to that question that I raised or not. I did not believe it was necessary under the new Rules to present evidence to support our denial of the public use and sale.

The Court: Where specific instances are relied upon and it is claimed that they are complete anticipation, they must be specially pleaded. That is my understanding, although I may be wrong about that.

Mr. Litzenberg: We will file the amendment and serve a copy.

Mr. Huebner: If your Honor please, I desire to object to the filing of this amendment to the answer or amended answer at this or any other time on the ground that it is not timely under Section 69 of Title 35 of the U. S. Code Annotated, that section requiring this particular type of notice to be given in addition to the pleading of the general issue at least 30 days prior to the trial. It is our position that, unless there is some reasonable excuse, some genuine excuse, for the defendant not

(Testimony of Charles Boyden.)

having filed it [130] 30 days prior to the trial, he is forever barred from asserting this defense. I desire to have my objection entered on the record to the amendment and to any testimony or evidence or proof of any kind directed to these defenses.

The Court: Let the objection appear.

Mr. Litzenberg: Yes, sir. We refer to Rule 8, sub-section b. "This rule supersedes the methods of pleading prescribed in the U. S. C., Title 19, paragraph 508, and also U. S. C., Title 35, paragraph 40, (proving under general issue, upon notice, that a statement in application for an extended patent is not true)", and referring especially to Section 69 and similar statutes. That is superseded by the general provisions included in Rule 8 as the general rules of pleading. [131]

The Court: In the course of time our Circuit Court of Appeals will probably pass on it. Until that time, I will allow the filing of the amendment.

Mr. Litzenberg: We will recall Mr. Boyden.

Mr. Huebner: Mr. Litzenberg, you had turned the witness over to me for cross examination. Do you have further questions?

Mr. Litzenberg: Yes; I have further questions.

Mr. Huebner: Very well. [132]



## CHARLES BOYDEN,

recalled as a witness on behalf of defendants, having been heretofore duly sworn, testified as follows:

## Direct Examination

resumed.

Q. By Mr. Litzenberg: Mr. Boyden, I would like to ask whether or not you ever applied for any patents on your spray guns.

A. The first I did but the one in issue here not.

Q. You never applied for a patent on that one in issue? A. No.

Q. Have you any reason to give for not applying for a patent?

Mr. Huebner: Just a minute: I object to that on the ground it is not relevant or material.

The Court: It is not unless it involves some agreement of some kind.

Mr. Litzenberg: Excepting to bring out the fact that he did not consider it involved invention.

The Court: I don't think his ex parte opinion is material.

Mr. Litzenberg: It is immaterial, I guess.

Q. In your testimony the other day, in explaining the development of your invention, you testified that you got a number of ideas from circulars, foreign circulars, which you had received from your correspondent. Who is the [133] correspondent that you referred to?

A. Mr. Gossner, our exporter.

Q. Where is he located?

(Testimony of Charles Boyden.)

A. In New York City.

Q. What is his business?

A. Export business.

Q. I hand you herewith three different circulars and will ask you if you have ever seen those before.

A. I have.

Q. Do you know where they came from?

A. From Mr. Gossner.

Q. And you have had them in your office since receiving them from Mr. Gossner?

A. I have.

Q. Until the time you gave them to me?

A. I did.

Q. Now, will you please explain just briefly what each one of those circulars is?

Mr. Huebner: I object to this unless it is established that these circulars constitute part of the prior art. There is no date shown at the present time.

A. There are.

Mr. Huebner: I won't accept any date on the foreign documents. I think the witness should testify as to how long he has had them in his possession.

Mr. Litzenberg: We are just putting them in in answer [134] to his statement, and for the further reason that all of these circulars disclose the same spray gun shown in the French patent that is introduced in evidence.

Mr. Blount: That is your opinion.

(Testimony of Charles Boyden.)

Mr. Huebner: I still say that it is not competent unless it is shown to be part of the prior art.

Mr. Litzenberg: We are introducing it as disclosing a part of the prior art. We have no definite proof other than just the document itself, and the fact that those documents were received by Mr. Boyden from the New York agent.

The Court: When was that?      A. In 1933.

Q. By Mr. Litzenberg: Will you explain, if you can, how he happened to send these to you?

Mr. Huebner: That is objected to as irrelevant and immaterial.

Mr. Litzenberg: No, I think not.

The Court: Well, he may answer that.

Mr. Huebner: And moreover these are printed in some foreign language, or some of them are. I object to them as incompetent, unless they are translated or the witness testifies that he can read the language in which they are printed.

The Court: That is correct. Counsel should supply translations.

Mr. Litzenberg: Well, I think a translation will not be [135] necessary. I am willing that the objection shall be entered.

The Court: Sustained, then.

Mr. Litzenberg: An exception.

The Court: Yes.

Q. By Mr. Litzenberg: Just briefly explain how Mr. Gossner happened to send these to you?

(Testimony of Charles Boyden.)

Mr. Huebner: I thought my objection went to any testimony in regard to these, your Honor.

The Court: Yes. If they are not coming in, it is immaterial how he happened to send them.

Mr. Litzenberg: I would like to offer in evidence, however, this one circular, entitled "El Salvador," printed in Spanish, simply for the disclosure that is made in the drawings, bearing date Febrero, 1933.

Mr. Huebner: That is objected to as incompetent, on the ground that the document must be considered as a whole, and unless there is a translation it can not be properly introduced.

The Court: I am inclined to sustain that objection. We will have to find out what the man is getting at.

Mr. Litzenberg: The reason I am offering this, if the court please, is that the drawing is the same drawing in all of the several circulars that is shown in the French patent which has been introduced in evidence with the translation. [136]

Mr. Huebner: Well, that patent shows for itself, then.

Mr. Litzenberg: Yes, that is true. But it was such good corroboration that we felt that it would be helpful to the court in establishing the definiteness and certainty of the French patent and the construction shown in the drawing. We may wish to ask later for the privilege of introducing it, with a translation.

(Testimony of Charles Boyden.)

The Court: You have a right to renew the offer.

Mr. Litzenberg: I think you may take the witness

### Cross Examination

Q. By Mr. Huebner: Is this the so-called French gun which you referred to on your direct examination? A. It is.

Mr. Huebner: It doesn't have any exhibit number.

Mr. Litzenberg: If you would like, Mr. Huebner, we would be very glad to introduce that and have it marked.

Mr. Huebner: It doesn't make any difference to me. I will interrogate the witness.

Mr. Litzenberg: It is our plan to introduce it. Perhaps I should have done that.

Q. By Mr. Huebner: Which French patent did you say this physical gun embodies, according to your interpretation?

A. The Societe Nouvelle patent, or it is a patent, I think, assigned to the Societe Nouvelle. [137]

Mr. Huebner: Where is that?

Mr. Litzenberg: They are in the French Consulate. They haven't been returned yet.

Mr. Huebner: That is one of the patents for which there was no translation?

Mr. Litzenberg: Yes, and we withdrew it with the consent of the court and left a receipt for it. It should be here.



(Testimony of Charles Boyden.)

Mr. Huebner: It is a little difficult, your Honor, without the translation, to——

The Court: You can pass it for the time being.

Mr. Huebner: I will pass that.

Q. By Mr. Huebner: Mr. Boyden, on your examination previously you stated upon various occasions, once at page 59 of the record, and again at page 72, and there may have been some others—I don't recall—that one of your reasons for making the combustion head as an integral unit distinguishable from and separable from the power unit, although they were mounted in combination for operation, was that you wanted to get away from an aluminum gas head, and you say, "I wanted a bronze seat on my valve." Do you recall that that was your testimony? A. That is the reason.

Q. Isn't it a fact that you have, since the manufacture of the first Mogul gun, which is in evidence as Exhibit 8, manufactured other Mogul guns in which the [138] combustion unit was made of aluminum? A. That is so.

Q. And those guns in which the combustion unit is made of aluminum are identical in construction with the physical Mogul gun, Exhibit 8; is that right?

A. No, they are not of identical construction. The leads, the hose leads come off the bottom.

Q. You mean the leads for the gas——

A. Those were to lighten up the gun. They are not as satisfactory as that.

(Testimony of Charles Boyden.)

Q. Well, don't anticipate, please, and it will save time if you will just keep it in order. The leads for the acetylene and oxygen and the air, you say, are introduced from below?

A. That is right.

Q. Instead of from the side? A. Yes.

Q. The rest of the head is identical with the head on this gun, isn't it? A. No, it is not.

Q. In what respects is it not?

A. The valve is around on the bottom. The rest of the head is very much the same as your little Metallizer or the French gun. The hose comes down at the bottom, and the valve is just above the hoses.

Q. But isn't it true that the combustion head is [139] mounted beneath the shoulder or abutment of the forward end of the member? A. Yes.

Q. And is detachable from the member?

A. It is.

Q. In the same way that the Mogul gun, Exhibit 8, has a detachable combustion unit?

A. That is right.

Q. How many guns of the character last described, that is to say, the Mogul guns, with the aluminum combustion head, have you made and sold?

Mr. Litzenberg: We object to that as immaterial and not having any bearing on the question of infringement.

The Court: Well, have you sold many?

A. Not many. Maybe 25 or 35.

(Testimony of Charles Boyden.)

Q. By Mr. Huebner: Is there any difference between those Mogul guns with the aluminum combustion unit and the Mogul guns with the bronze combustion unit, other than you have mentioned?

A. You mean in the way they operate, or anything?

Q. Yes. A. No. They all operate the same.

Q. They all operate in the same way?

A. In the same way. The performance is the same.

Q. And the construction of both of the Mogul guns, with the aluminum head and with the bronze head, is [140] substantially identical?

A. It is.

Q. I notice that in your direct testimony you discussed the French patent 680,554, for which we are waiting for the translation, and also the Valentine U. S. patent, and you did not discuss in your examination any other prior patents in evidence. Is there any patent among those which your counsel has offered which you consider to be closer to the disclosure of the patent in suit than this French patent and the Valentine U. S. patent?

A. I don't think I understand just what you mean.

Mr. Huebner: Will you read it, and then if you don't understand it, I will explain it.

(Question read by the reporter.)

A. You mean that discloses prior art?

(Testimony of Charles Boyden.)

Q. By Mr. Huebner: Yes. Is there any patent other than these two which you think is closer to the Lensch and Leder patent in suit?

A. Well, I would say each one has some particular thing that is not mentioned in the Lensch and Leder patent.

Q. Well, let us confine ourselves to this particular question and answer. Is there any one patent among those offered in evidence by defendants' counsel which alone is closer to the disclosure of the patent in suit than these two that you have mentioned?

A. Well, I think the French patent is the closest.

[141]

Q. You mean French patent——

A. That gun over there.

Q. 680,554?

A. Well, I can't identify it. I don't know it. I can't identify the patent number.

Q. The patent which you say is exemplified by this French gun here?

A. That is the one. Well, that is all right. I took some screws out of it.

Q. You have the screws, have you?

A. In my pocket.

Q. Then that French patent, in your opinion, shows more of the features of the Lensch and Leder patent than any other patent in the prior art; is that correct?

A. I would think so, yes.

(Testimony of Charles Boyden.)

Q. Have you read and are you thoroughly familiar with this French patent?

A. I have never read the patent itself. I mean I can't read French. But I can tell from the drawings just what features are, well, desirable, if you want to call it that.

Q. Have you ever seen and read a translation of this French patent?           A. I have not.

Q. Then in your testimony you were relying wholly upon what appeared on the face of the drawing, without reference to the descriptive matter in the specifications? [142]           A. That is true.

Q. Here is one French patent with a translation, Defendants' Exhibit B, and it is No. 741,740. You have, I presume, read the translation of this patent?           A. I glanced through it, yes.

Q. Did you look at it carefully enough to know its contents?

A. Well, the thing that I was interested in in the drawing is not mentioned in the patent, and that is the exposed feed rolls, visible feed.

Q. The exposed feed roll feature is not mentioned in the patent?           A. No.

Q. You looked for that?           A. Yes.

Q. And found no reference in the translation of the specifications to that feature?

A. No reference. It shows in the drawing.

Q. There were two French patents, for which there were no translations, and we discussed one



(Testimony of Charles Boyden.)

which you say you didn't read, because you don't read French. Do you know the other one?

A. I don't recall what it was.

Q. Is it French patent 639,039?

A. I wouldn't know.

Q. Have you read that specification? [143]

A. It is in French.

Q. Then you haven't read it? A. No.

Q. Directing your attention to the drawing of this French patent No. 680,554, will you explain to the court what Figure 4 illustrates and how that element fits into the gun?

A. Figure 4 has only to deal with the combustion chamber.

Q. Well, what is it?

A. Well, it is a siphon arrangement. It is attached to the oxygen tank and supplies oxygen and, also, there is hooked to it a hose.

Mr. Huebner: Does your Honor have a copy of that drawing? I think not because I provided the witness with the one we had.

A. It has nothing to do at all with anything involved in the patent. It is a separate unit that is away off here somewhere.

Q. I would like to have you explain to the court what it is, what functions it performs and where it fits into the disclosure of the patent.

A. It is the mixing chamber where the gases are mixed between the tanks, the acetylene and oxygen tanks, and the gun. In other words, there is a hose

(Testimony of Charles Boyden.)

attached here and this is a fitting here that screws on the oxygen tank. [144] I have seen one of these. And then the gases go on out and they go to the gun.

Q. Does this element in Figure 4 fit somewhere in the gun?           A. No.

Q. Where does it go?           A. On the tanks.

Q. What is this element 33?

A. It is an attachment to the tank.

Q. This element 33 you say is an attachment to the tank?

A. I would think so; yes. I haven't read the description of the patent.

Q. You say you can read the drawings and I want to inquire about that.

A. Well, I can. That is the mixing chamber.

Q. So this collar 34 in Figure 4 screws onto the oxygen tank?

A. I think it does unless this is slightly different than the one that we have. We have one that is similar to this.

Q. And the element 33 you take it to be merely the line between these parts?

A. It may be a diaphragm of some kind that goes in there. I can't tell. Anyway, here is what I am getting at. This member is loose from this member. Obviously, this is a mixing chamber. It is of the siphon type. [145]

Q. Turn it so the court can see it.

A. It is of the injector type, you might call it.

(Testimony of Charles Boyden.)

Q. You say the mixing of the gases occurs before the gas and acetylene get up to the gun?

A. In this drawing here it does not, evidently.

Q. Well, now, do you mean that there are two embodiments of the invention in this French patent?

A. This is a mixing chamber of some kind.

Q. Which are you referring to? A. This.

Q. Figure 4? A. Figure 4.

Q. Is there a mixing chamber in the gun itself?

A. There is a mixing chamber in the gun. Have you the original so I can see it more clearly?

Q. Your counsel has the original from the French consulate. This is the best copy that I have.

A. As a rule, there are some plates in there where the mixing takes place. I don't think this is the same drawing as the other one.

Q. You mean that there is something erroneous in this drawing?

A. No. I think this is a different patent than the one that we have.

Q. Well, let's check on that. It appears to be patent No. 680,554. [146]

A. Well, I don't know.

Q. Now, do you think you were in your other testimony referring to some other patent?

A. What was the patent we introduced?

Q. This is it. Well, you introduced several of them but this is one of them that you referred to on your direct examination.

(Testimony of Charles Boyden.)

A. Well, the only thing that we are discussing is the enclosed housing and so forth on this patent.

Q. But that is not all I am discussing. I want to know how much of the rest of that disclosure you understand and I think it is important that you reveal to the court just how much of that drawing you do clearly understand.

A. I don't clearly understand this here or this here.

Q. What are you talking about now?

A. This part here.

Q. Figure 4?           A. Figure 4. And this here.

Q. In Figure 6?

A. Yes. This looks as though it might be some sort of a backfire preventer.

Q. But you are not positive of that?

A. I am not positive.

Q. Are there any other figures in there that you don't understand?

A. It doesn't show in the drawing whether there are three [147] valves here or two. You see in that gun there there are three valves.

Q. What gun?           A. The French gun.

Q. The physical specimen?

A. The physical specimen. There are three valves down here. In this gun there is no front view to show whether there is one valve or two valves or three valves except this. [148]

Q. And you are now pointing to Figure 5?

(Testimony of Charles Boyden.)

A. Figure 5. If I may have that gun, I can explain it to you. The valves I refer to, these valves here, are evidently these members here. In this gun there are three, yet they only illustrate two there and there is no front view of the gun to show whether there are three or not.

Q. If there were only two, as shown in Figure 5, what would those two be for?

A. One could be for air and one could be for gases. I mean the mixed gases. It could be.

Q. But you are not positive whether it is or not?

A. No; I am not positive. In this gun here there is no question but what one is for acetylene or hydrogen and oxygen and air.

Q. You are talking about this physical specimen?

A. This physical specimen. There is no question about that. But here it could be air and mixed gases.

Q. And you are referring now to Figure 5 of the French patent?

A. Yes. And, if it is mixed gases, then this would be no doubt a mixing chamber.

Q. Referring to Figure 4? A. Figure 4.

Q. But you are not positive as to that arrangement or relationship? A. No. [149]

Mr. Huebner: In view of that, your Honor, I move to exclude all of the testimony referring to the physical specimen of the so-called French gun



(Testimony of Charles Boyden.)

on the ground that the witness is not shown to clearly understand the French patent. The gun itself is not prior art and has not been established as prior art, and the French patent must be relied upon for what it shows on its face and, under our well-known rules, must be strictly construed as to disclosure.

A. But that picture shows clearly——

Mr. Huebner: Just a minute until the court considers that.

Mr. Litzenberg: We want to oppose that objection on the ground that counsel has interrogated the witness in regard to an immaterial part of the invention involved in this case, the claims being wholly drawn to the structure which is shown in section and which the witness is able to describe in detail and explain the reason for the construction and for the arrangement. The question of the gases and the conveyance of the gases to the machine is not involved in the patent in any manner and is not included in the claims.

Mr. Huebner: It is part of the combustion unit.

Mr. Litzenberg: It is only in a general statement.

A. This is not used in the plaintiffs' gun nor is it used in our gun.

The Court: I will deny the motion and an exception may show and I will hear argument later.

(Testimony of Charles Boyden.)

Q. By Mr. Huebner: Does that French patent drawing illustrate any hole in the top of the gun?

A. Well, there is no drawing of it except it shows the gun completely open here.

Q. Is there any disclosure anywhere in the drawing of the French patent of a hole for any purpose in the top of the gun?

A. Do you mean in the picture or drawing here?

Q. In the drawing of the patent.

A. The top is wide open.

Q. Then, is there a disclosure of a cover with a hole in it?           A. No.

Q. There is in this physical specimen some kind of a hole in the top in the gun, isn't there?

A. There is. That is where the latch goes.

Q. And that is free to allow venting, isn't it?

A. It is.

Q. Is there any means disclosed in that French drawing for adjusting the pressure of the feed wheels, the wire wheels?           A. There is none.

Q. There is nothing shown at all?           A. No.

Q. Is there in the physical specimen which you have referred to for illustrative purposes? [151]

A. Do you mean this gun here?

Q. Yes.           A. No.

Q. There is nothing there, either?           A. No.

Mr. Litzenberg: What was that question, please?  
(Record read by reporter.)

(Testimony of Charles Boyden.)

Mr. Litzenberg: Is that all of the question? What is the question preceding it?

(Record read by reporter.)

Q. By Mr. Huebner: Isn't the feature of adjustability an important feature in a gun with utility?

A. Why, it is helpful. We have it in our old little gun.

Q. Without any feature of adjustability, you can only use one size of wire, can't you?

A. Well, it is a matter of spring pressure, I think, that you are referring to now.

Q. That is part of it.

A. You can adjust or in our gun you adjust——

Q. I am talking about the feature of adjustability which is lacking in the French patent.

A. Oh, in this, yes. That accommodates different sized wires; I mean to take up for the difference in the diameter of the wire.

Q. Which the French gun will not do? [152]

A. Oh, no. It will do it. They use different sized wires in the French gun.

Q. But, when you have different sized wires in and no adjustability, you are going to have an uneven feed, aren't you?

A. No.

Q. Do you mean you can use different sized wires in a gun in which there is a fixed spacing between the lower feed wheel and the upper feed wheel?

(Testimony of Charles Boyden.)

A. I don't say it can. I say they do. I will bring up another gun here and show you that they do it.

The Court: He means to ask how does the machine operate to adjust its feeding pressure to different sized wire.

A. Your Honor, the difference in the size of the wires is very little. In this gun I think they use about what would be equivalent in our size to about forty-thousandths diameter and possibly sixty or seventy-thousandths diameter, meaning a difference of a thirty-second of an inch, and there is plenty of give here in this spring to accommodate that difference.

Mr. Litzenberg: May I interject here that, while it is not adjustable, counsel has not brought out that it is yieldingly mounted?

Q. By Mr. Huebner: This French disclosure No. 680,554 is quite similar to your Metallizer gun, isn't it? A. It is. [153]

Q. It has, in Figure 1, a plurality of gas and oxygen passages in the forward wall of the box, hasn't it? A. That is right.

Q. And in that respect it is similar to your Metallizer? A. Very similar.

Q. And in that respect it is wholly dissimilar to your Mogul? A. It is.

Q. This French patent discloses a boxlike casing, doesn't it? A. It does.

Q. And there is a cover on the casing, isn't there? A. An outside cover here?

(Testimony of Charles Boyden.)

Q. Yes.           A. Yes.

Q. It is covered all around, top, bottom, sides and ends?           A. It is.

Q. And the cover must be closed in order for the gun to operate, mustn't it?           A. It must.

Q. And in those respects which I have last detailed the French gun is similar to the Metallizer, isn't it?           A. It is.

Q. And in those respects it is dissimilar to the Mogul, [154] is that correct?           A. No.

Q. Do you want to explain your answer?

A. Those are collective questions there. Ask them individually and I can explain that. It is similar to the Mogul in that we have a housing here. It is similar to the Mogul in that there is a housing here enclosing the gears. That is similar to the Metallizer in that we have to close the cover and similar to the Metallizer if you would remove the housing.

Q. You mean if you remove the housing of what?           A. This housing here.

Q. If you remove the housing of the French gun, then it is similar to the Metallizer?

A. Then it is similar to the Metallizer; yes.

Q. Does the French gun have an open channel in the sense that the channel of the patent in suit is open?           A. No.

Q. Does it have an open channel in the sense that the Mogul gun has an open channel?

A. No.



(Testimony of Charles Boyden.)

Q. Does it have a combustion unit which is a separate unit from the power unit and is detachably mounted on the forward portion of the power unit?

A. Well, as a matter of fact it does. The front wall of the gun here carries the gas passages. The mixing takes [155] place in these little plates here, although they don't show here.

Q. You mean they don't show in the patent drawing?

A. They don't show in the patent drawing but, as a matter of fact, this is slightly different in this gun in that the mixing takes place here in this gun and the mixing takes place here in this gun, and from here over——

Q. Just a minute. You are saying "this" and "this" and I would like you, please, to refer to the patent or to the physical specimen so that it will be clear later what you have said.

A. I will say this, that the mechanical portion of the gun is identical with this.

Q. You say the mechanical portion of the French patent is identical with the mechanical portion of the specimen?

A. Yes, sir; of this one here.

Q. What do you mean by the mechanical portion?

A. This is the gas portion of the gun, the combustion portion, the drive taking the—or everything enclosed from here back is identical with this.

(Testimony of Charles Boyden.)

Q. Let's get back to the question. Is there in the French patent a detachable combustion unit in the sense that there is a detachable combustion unit in the Lenseh and Leder patent?

A. Do you mean where the gases enter the gun, until [156] they come out of the front end of the gun?

Q. Yes. A. It is not; no.

Q. It is not found in the French patent, is it?

A. No. But, taking it literally, the combustion takes place in this gun here from here forward. In the mixing of the gases without that there is no combustion.

Mr. Huebner: I move, your Honor, to strike the last part of the answer as not responsive.

The Court: I will allow it to remain as explanatory.

Q. By Mr. Huebner: It is a fact, is it not, that in the French patent all passages for air, oxygen and gas, are in the forward wall of the housing?

A. In this patent here?

Q. I am talking about this French patent.

A. No. There are two channels, evidently. I imagine those holes there are the channels. The air comes up here and the mixed gases come up here.

Q. But don't they all pass through this thickened forward wall of the casing? A. Yes.

Q. So there are passages for gas and for air and for oxygen in the forward wall of the casing, isn't that right?

(Testimony of Charles Boyden.)

A. Well, it is according to how you want to interpret that. The gas and the oxygen or the acetylene and the oxygen, or whatever gas you use, are mixed and pass up as a [157] mixed gas. They are not separate gas passages for those two gases.

Q. Awhile ago you said that you were not sure whether there were two passages or three passages.

A. I can't see the front of the drawing so I wouldn't know whether this is illustrative of just two members or three.

Q. Whether there are two or three, they do go up through the forward thickened wall of the casing, don't they?

A. They do; surely.

Q. And that forward thickened wall of the casing is in no sense detachable from the power unit of the gun, is it?

A. It is not detachable.

Q. In that respect the French patent gun is subject to the same disadvantages as the Metalizer, isn't it?

A. Well, if they are to be considered disadvantages.

Q. In that French patent you can't see the wire under any conditions during the operation of the gun, can you?

A. Not in a normal position; no. You might be able to peek down through the hole and see it but I doubt it.

Q. Through what hole?

A. Through this aperture here.

(Testimony of Charles Boyden.)

Q. I am talking about the French patent.

A. It doesn't show anything.

Q. It doesn't show in the French patent? [158]

A. There is no lid on the gun so you can't see it.

Q. So far as the disclosure of the French patent goes there is absolutely no way to inspect the wire during the operation of the gun, is there?

A. There is no way to tell whether you can inspect it because there is nothing shows.

Mr. Litzenberg: We would like at this time, if your Honor please, to offer an objection to the faint print which is being used for the purpose of examining this witness.

Mr. Huebner: Well, you produce a better one, Mr. Litzenberg.

Mr. Litzenberg: We will as soon as it is returned from counsel's office.

Mr. Huebner: Here is a negative. If the witness can read that, he is welcome to it.

A. But the point is this, the lid doesn't show on a plan view so you can see whether there is a hole in it or not.

Q. That is all right. I won't debate that with you. I want you to testify as to what is or is not shown in that French patent, not what might be or could be. A. Well, that is not shown.

Q. Figure 1 illustrates the gun with the lid installed and closed, doesn't it?

A. It is a side view. [159]

(Testimony of Charles Boyden.)

Q. Can't you answer the question yes or no?

A. Yes; it does.

Q. Maybe you could do better with this negative. I am happy to have you use it if it will help.

A. Oh, yes; this is much better.

Q. In Figure 1, where the lid is shown or the cover is shown in place and closed, there is no indication of any kind that there is a port or hole in the top of that cover, is there?

A. There is no indication.

Q. So that as far as the disclosure of the patent is concerned there is absolutely no way to inspect the wire during the feeding operation, is that right?

A. From the picture there is no way of telling whether you can inspect it or not.

Q. Can't you answer the question?

A. Put the question again, will you?

The Court: You mean that there may be such but the diagram does not illustrate it, is that it?

A. That is what I mean; yes. I think that is a fair answer.

Q. By Mr. Huebner: If you raised the lid or cover of the French patent to inspect the wire, the feeding operation would stop, wouldn't it?

A. It would.

Q. Would you be able in this French patent to insert [160] the wire after lighting the flame or would that be a dangerous operation?

A. Well, I couldn't say as to that. I never operated the gun and never saw one operate. [161]



(Testimony of Charles Boyden.)

Q. Well, to the best of your judgment as an engineer who says he knows this art, what do you think?

A. I think it would be better to have the wire in the wire nozzle.

Q. If you didn't put the wire in the nozzle before you lighted it, what might happen?

A. The gas might get back in the case. There is a possibility it might.

Q. And, if the gas got back in the case, it might explode?

A. It might explode.

Q. The same as the Metallizer?

A. Oh, yes; sure.

Q. Is there some sort of a safety device disclosed in this French patent to take care of any explosion or backfire?

A. Well, in that reference I made a while ago to this member here, No. 6, I said it looked to me like a safety device.

Q. That is the only safety device that you see illustrated in the drawing?

A. That is the only thing I see there; yes.

Q. I would like you to look carefully because it might prove to be an important point.

A. As I said a while ago, this might be some sort of a diaphragm here. I said, first, it was attached on the [162] tank but I said later it might be some sort of a diaphragm arrangement. That would be No. 33.

(Testimony of Charles Boyden.)

Q. Is it necessary in your Mogul gun to provide any safety arrangement such as has been illustrated according to your testimony? A. No.

Q. And it is not necessary in the patent gun to provide any safety arrangement, is it? I am talking about the Lensch and Leder patent.

A. No; it is not.

Q. And that is because in the Lensch and Leder patent in suit and in the Mogul gun any backfire will not injure any of the working parts, is that right? A. Yes; that is true.

Q. And that, if there should be a gas leakage, it will not accumulate in a pocket and cause any explosion, is that right?

A. That is true. But this has nothing to do with that from my understanding of it.

Q. What is that?

A. This arrangement here has nothing to do with what you are talking about.

Q. What is your understanding of it?

A. This French gun and also the Schoop gun which Schoop made in Switzerland mix the gases at the tanks. And it runs the hose around the floor. It is combustible [163] gases or I mean gases ready to burn and at the end of the wire nozzle. And I have seen those explode and tear the whole hose up. So evidently that is what that is for, so that it wouldn't have any effect of backfire there.

Q. Aren't these safety features that we have just been discussing with respect to the Mogul gun

(Testimony of Charles Boyden.)

and the Lensch and Leder patent gun partly due to the fact that the wire feed wheels operate in an open channel?

A. No. It has nothing to do with this safety feature here.

Q. I am not talking about the safety feature there. What I am talking about is the fact that the Mogul gun and the patent in suit will not cause any injury to a person and no serious injury to the operating parts if there is a backfire and that no gas can accumulate in a pocket. Taking those two features, that is true, is it not, because the wire feeding wheels in both the Mogul and in the Lensch and Leder patent in suit operate in an open channel?

A. No. The fact that they operate in an open channel has nothing to do with it. The old goose-neck gun is that way.

Q. By the Court: Do you mean with an open channel the gas dissipates itself, whereas, if it is closed, it becomes condensed?

A. No, your Honor. May I have that goose-neck gun, please? Will you permit me to illustrate what I mean? [164]

The Court: Yes.

Q. By Mr. Huebner: Is this what you mean?

A. That is the one. This gun has no open channel, yet it has that feature. Do you see what I mean? In the other gun there is a channel in here. Well, you saw the other gun. But in this gun

(Testimony of Charles Boyden.)

the feed is off to the side and there is no open channel. So that doesn't have anything to do with it. The fact that there is no open channel has no bearing on it.

Mr. Huebner: I should like to have this gun marked for identification which the witness just had in his hands and said had no open channel.

The Clerk: Plaintiffs' Exhibit No. 14 for identification.

Q. By Mr. Huebner: In a previous answer you pointed out that in the French patent there is no tension-adjusting mechanism for the feed wheels.

A. That is true.

Q. And it was your testimony also, I believe, that that is not necessary; that a tensioning device is not necessary.

A. Not with the limited diameter or range of wire.

Q. Then, why do you put a tensioning device in the Mogul gun?

A. It is what you might call a fixed tensioning device. You screw it down until it just makes tension and after that it is purely flexible. May I explain there that we [165] accommodate all the way from 11-gauge wire to  $\frac{1}{8}$ -inch wire, which is about 91/1000 to 125/1000, with any difference in adjustment? If you study our gun, you can see that.

Q. In the same gun?

A. Yes.

(Testimony of Charles Boyden.)

Q. But, without that spring-tensioning feature, you wouldn't be able to do that, would you?

A. This has the spring.

Q. Which has the spring?

A. This gun here.

Q. The French gun?

A. There is the spring.

Q. Wait a minute. Look at the patent and not that physical gun there. Where is there any spring shown in the French patent?

A. That is right; there is none. Well, wait a minute. It is not illustrated in here but I am not so sure it is not illustrated in here.

Q. If you can find it anywhere in the French patent, point it out to the court.

A. Well, that isn't new. That is old anyway.

Mr. Litzenberg: Describe the Figure and the number. Just give the number.

A. It doesn't even show a number on it.

Mr. Litzenberg: Give the Figure.

A. Figure 1. [166]

Q. By Mr. Huebner: You say there is a spring illustrated in Figure 1?

A. You can't see the spring because it is covered up but there is a sort of a boss there that would indicate there was some member in there.

Q. You don't know, do you, whether there is or is not a spring? A. I don't.

Q. By the Court: Is there any advantage in varying that spring pressure?



(Testimony of Charles Boyden.)

A. Well, I don't know. It used to be considered such but we don't make any provision for it in our Mogul. We use a heavier spring of better construction and it has got more latitude.

Q. Mr. Boyden, in this series of questions where you and I referred to this French patent, did you mean that we were talking about patent 680,554?

A. Which one is this? Is this the same one we introduced?

Q. That is one of those you introduced. I just want to clear the record, that when we talk back and forth about this French patent we are talking about French patent No. 680,554?

A. That is the one I am referring to now, yes.

Q. And that is the one you have been looking at? A. Yes. [167]

Q. Isn't it also true that a spring adjustable tension device is important, because of the use of different types of metal wire in spraying?

A. We have never found it so.

Q. You don't feel that you need a heavier tension with steel than you do with lead?

A. You get a heavy enough tension as it is.

Q. Well, I want you to answer that question. Isn't it advisable to use a heavier tension with steel wire than it is with when you are feeding lead wire?

A. It might be advisable to, but we have made no provision for it. We don't have any trouble.

Q. What do you mean, you don't have any trouble?

(Testimony of Charles Boyden.)

A. Well, we don't have wire slippage. It is the same answer.

Mr. Litzenberg: If the court please, I may state that we have received these two French patents. They have been returned with the report that the man who was to translate them, for some reason they have a sickness, and then they sent it over to the consul, and the consul is observing a holiday today, and they were unable to give us the translation. Whether or not it is worth going to the trouble of calling an interpreter to take the witness stand and interpret these drawings—we should be very happy, and we don't see any reason why it should not be agreed to by counsel, to permit the presentation of the translations [168] later, to be attached to the French patents which have been presented for identification.

Mr. Huebner: It seems to me that is trying the case piecemeal, that we ought to have before us during the trial what we are talking about.

Mr. Blount: They knew they were going to use these French patents, in advance, and they made no preparation to have translations here.

The Court: Could an interpreter be called to read them into the record?

Mr. Litzenberg: I assume such an interpreter could be had. We did not expect that counsel were going to rely upon technicalities in patent cases where the drawings are just as clear to a man who reads drawings as is the French or the Spanish

(Testimony of Charles Boyden.)

language. The fact of the matter is the drawings are just as clear as can possibly be, and all we want to do is to get all the truth before the court.

Mr. Huebner: Well, his own witness says that there are some features of the drawing that he can't make out. I never heard of counsel offering foreign patents without translations, and it is assumed that whoever is going to offer foreign patents will produce translations of them.

Mr. Litzenberg: I confess to neglect in getting the translations. I don't believe this case is going to be decided upon any strict technicality.

Mr. Blount: It is not a technicality. [169]

Mr. Litzenberg: Yes, it is.

The Court: You can either call your interpreter or agree upon translation being made and filed. I suppose it can be done before the case is completed.

Mr. Litzenberg: May I ask if the court has a regular interpreter?

The Court: Not that I know of, not Spanish.

Mr. Litzenberg: Will counsel agree to allow the interpretation, the translation to be introduced later

Mr. Blount: It hampers the plaintiff on cross examination, having a patent brought in here without having the patent claims set forth in English. The claims of the patent are just as important to explain the diagrams as the diagrams are themselves.

(Testimony of Charles Boyden.)

Mr. Litzenberg: That is where counsel is mistaken. The claims of foreign patents have nothing whatever to do with the suit. It is only the description, and the description is no clearer to a mechanic than the drawings themselves are. [170]

Mr. Huebner: In many cases, Mr. Litzenberg, the courts refer to the claims of foreign patents to get a clear picture of the disclosure. And of course, Mr. Blount is talking about the disclosure.

The Witness: Do you have translations?

Mr. Litzenberg: I understood counsel had translations of these same patents, if they want to use them.

Mr. Blount: We have our own translations. We are not certain that they are correct in detail.

Mr. Huebner: We only had our translations made informally, to check against the translations which we presumed would be produced by the defendants' attorney.

Mr. Litzenberg: We are willing to accept counsel's translations without any question.

The Court: Of course, if you are not certain that your translations are correct, I don't know how you could cross examine the witness with the idea of impeaching him.

Mr. Blount: We didn't make them with the expectation of using them here, but only as an aid in examination.

The Court: Yes, but you can't contradict him under those statements, can you, when you are not sure of your own translations?

(Testimony of Charles Boyden.)

Mr. Litzenberg: If your Honor please, when you get right down to the matters involved in this case, all of this discussion is absolutely immaterial and does not go to the question of the infringing construction compared with [171] the alleged claims.

Mr. Huebner: Do you mean that you want to withdraw these patents?

Mr. Litzenberg: No, I do not. I am simply presenting these foreign patents to show the state of the art, to show that this question of gun operating mechanism has been gradually developed until all invention involved has been taken up, and what Boyden has done and what Lensch has done is nothing more than mechanical skill. There is only one element involved differentiating the Lensch patent from the prior art, and that is called for in the claims, and that is the open channel and the reason for the open channel, and that can all be taken care of in argument, from what has already been presented to the court. I am satisfied the court understands the mechanism, without any of the mechanical disclosures which have been referred to.

Mr. Huebner: After conferring with my associates, it is agreeable to cooperate with counsel and aid the court, and our translations may be used as counsel wishes. The translations were made by Mr. Stokes, our expert witness, who reads French, and we offer the use of these at this time, if you desire.

Mr. Litzenberg: We appreciate that courtesy, Mr. Huebner.



(Testimony of Charles Boyden.)

The Court: They may be filed.

Mr. Blount: Mr. Stokes is a French scholar, and he has [172] made the translation.

Mr. Litzenberg: We will raise no technicality on that, and we will consider that this interpretation will be used in connection with the French patents that have been introduced.

The Court: The patents and the interpretations will be filed together.

Mr. Huebner: I think that as long as we have given Mr. Litzenberg two of the translations, we should also put in our own translation of the other patent, No. 741,740. Any objection to that?

Mr. Litzenberg: None.

The Clerk: As part of the same exhibit?

Mr. Huebner: As part of the patent, yes.

Q. By Mr. Huebner: Now will you turn, Mr. Boyden, to the Valentine patent, the U. S. patent?

A. I have it here.

Q. Is there any air turbine or other power device disclosed there?

A. There is none. It evidently is an outside drive of some kind.

Q. How is the outside drive communicated to the working parts of the Valentine gun?

A. Through a worm and gear.

Q. But what brings it in?

A. A flexible shaft, I suppose. [173]

Mr. Litzenberg: Can you refer to the reference numeral there?

(Testimony of Charles Boyden.)

A. I haven't read the patent. There is some kind of a member comes in there to make it operate, if it has to.

Q. By Mr. Huebner: There is no turbine housing in that Valentine patent, is there?

A. There is not.

Q. Is there any latch in that Valentine patent which is pivotally fastened to the gear case, which carries an adjustable tension, so that when the latch is swung the wire feed is feeding?

A. It shows no pivot at all, I mean, so that you can swing the case up. It shows a latch on one side, but there is nothing shown in the nature of a pivot. But it shows these screws are adjustable. And here is a spring here, and working the plunger exerts pressure on the shaft, the idler, and above that is a screw member, so that the pressure on the spring can be varied.

Q. That latch is not pivotally secured there so that it can be swung into or out of position, is it?

A. It doesn't show any kind of a hinge.

Q. The Valentine gear case is tightly closed, is it not?

A. It is.

Q. And any chips or dust from the wire will foul the wire feeding wheels in Valentine; isn't that true? [174]

A. They will.

Q. Can you select from all of the prior art which your counsel has offered any patent having a latch pivotally mounted in a channel which is open to the atmosphere, in a metal spray gun, which latch

(Testimony of Charles Boyden.)

device and wire feed wheel is adapted to rotate in the open channel, and which carries a tension device thereon adjustable during operation, whether the wire is visible or not?

A. May I read that myself?

Q. Well, I don't mind your seeing my notes, but my notes are not quite complete. I think it would be better for the reporter to read the question slowly.

The Witness: I can grasp it better if I read it myself.

The Court: Read it slowly.

Mr. Litzenberg: I think the question anticipates or contemplates furnishing the witness the various patents which have been presented, in order that he may——

Mr. Huebner: Naturally I will hand them to him.

The Witness: Yes, the patent itself. May I read the last Leder patent, the one that is under consideration?

Mr. Litzenberg: Now listen to the question as it is read, and then you will understand why these patents have been presented to you.

(Question read by the reporter.)

A. I don't think so, that exact description, under that description, nothing that I see here. [175]

Q. By Mr. Huebner: And you have looked over all of those that are in evidence? A. Yes.

Q. Is there any point made in the patent in suit, that is, the Lensch and Leder patent in suit, either

(Testimony of Charles Boyden.)

in the specification or the claims, that the wire shall be visible during feeding?

A. You mean do I know of any——

Q. Do you know of any particular place—are you able to designate any particular passage in the patent in suit where it is stressed that the wire shall be visible during feeding?

A. No. 2, claim No. 2, the last end of claim No. 2,—“whereby said wire feeding wheels are visibly disposed in said channel.”

Q. Is that the only reference that you find in the patent to the feature which I mentioned?

A. No. 3—“means for holding the said wire feeding wheels in cooperative engagement during the feeding of wire.” Well, no, that don’t mention it. I thought it did.

Mr. Litzenberg: It seems to me, if your Honor please, that the patent and the language therein contained speaks for itself.

The Court: I think so.

Mr. Litzenberg: And it is a waste of time to take counsel’s—— [176]

The Court: Yes. You can argue it.

Mr. Huebner: Let me just ask this question, then:

Q. In the patent in suit the full vision of the wire occurs only before the latch member is dropped; isn’t that true?

Mr. Litzenberg: We object to that. It speaks for itself. It is very clear in the drawings and the en-

(Testimony of Charles Boyden.)

larged charts presented. The witness' testimony wouldn't change it.

A. I think it does, yes.

Q. By Mr. Huebner: The answer is yes?

A. Yes.

Q. And the same thing is true, is it not, in the Mogul gun? A. Yes.

The Court: To the same extent?

A. Well, virtually, yes.

The Court: It is visible to the same extent?

A. He means before the gun is put in operation the latch is thrown back. That is what you refer to, isn't it?

The Court: Yes.

A. It is about the same.

The Court: Can you see as much of the wire in that position also in each case?

A. Yes.

The Court: And when they are closed, can you see it [177] the same?

A. No. In the Mogul you can hardly see it at all, unless you move the gun around in a certain position so you can see it.

The Court: That might be misinterpreted, unless we have the object before us.

Q. By Mr. Huebner: I believe you testified on direct examination, Mr. Boyden, that you knew of the Lensch and Leder patented gun before you designed the Mogul, and that you had seen circulars of the gun? A. That is true.



(Testimony of Charles Boyden.)

Q. Did you derive any help from those circulars in designing the Mogul? A. I did not.

Q. Didn't you look at the circulars?

A. Certainly.

Q. Didn't you take, borrow, what you could from the disclosures in those circulars?

A. I didn't need to.

Q. What do you mean, didn't need to?

A. There was nothing new, nothing new disclosed. This French gun had all the enclosed gear housing and all that, and I got that idea from that gun, and the rest of it works out that way, is all.

Q. You testify, do you, now, then, that you derived no benefit from the circulars of the plaintiff's patented gun [178] in your designing of the Mogul?

A. I would say so, yes. I say so.

Q. Didn't you get any ideas at all from the circulars of the plaintiffs' patented gun, which you incorporated in the Mogul?

Mr. Litzenberg: Well, the witness has testified that he did not, your Honor.

The Court: Let him be more specific, if he can. Did you get any ideas?

A. I don't recall of getting any.

Q. By Mr. Huebner: Did you seek any?

A. No. The guns, if you compare them, you will find they don't work anything alike. Certain fundamental ideas are there.

Q. Did you study the circulars of the plaintiffs'

(Testimony of Charles Boyden.)

patented gun, with the idea of deriving any teaching from them?      A. No.

Q. You didn't attempt to understand the disclosures on these circulars of plaintiffs' patented gun?

A. We no doubt studied the circulars. We studied all competitive equipment circulars.

Q. Didn't you study the plaintiffs' circulars of the patented gun very closely, in order to gain knowledge or information from them as to the construction of the gun?

A. I no doubt did, as to the construction of the gun. [179]

Q. What, if anything, did you learn from your examination of those circulars?      A. Nothing.

Q. Do you have present in court one of the circulars that you did examine and derived nothing from it?

A. It was introduced as evidence here. It was introduced as evidence here yesterday, circular 500.

Q. Circular 500?

Mr. Litzenberg: No, it wasn't introduced yesterday.

A. Well, it was in connection with that letter.

Mr. Litzenberg: That is one that we would like to introduce.

Mr. Huebner: Do you have one of those circulars that the witness is referring to?

The Witness: We probably have circular 500.

Mr. Blount: I object to the witness from the

(Testimony of Charles Boyden.)

witness stand aiding his own counsel or giving the answer, and ask that the statement be stricken.

The Witness: I am sorry.

The Court: It may be stricken.

Mr. Litzenberg: I will present counsel a copy of the bulletin referred to, Bulletin 500, copyrighted in 1934, by H. B. Rice, which shows a cut of the gun referred to in the patent sued on.

Mr. Huebner: May I show this to the witness?

Mr. Litzenberg: You may. [180]

Q. By Mr. Huebner: Is this Bulletin 500, which your counsel has produced, the circular to which you have been testifying? A. It is.

Q. Were there any other circulars than that one which you examined in an effort to learn what the Metal Spray Company was doing?

A. That is the only one I know of, recall.

Q. When did you first see this circular, this Bulletin 500?

A. Oh, I don't remember that. No doubt very shortly after it came out.

Q. But you are not able to fix with any certainty the date? A. No, I can't.

Mr. Huebner: Then I will ask that this be marked for identification.

Mr. Litzenberg: We are agreeable that you can have it introduced.

The Clerk: Plaintiffs' Exhibit 15.

The Court: Counsel consents that it may go into

(Testimony of Charles Boyden.)

evidence, if you choose. He says he has no objection to it being filed.

Mr. Litzenberg: The fact of the matter is, I would like to have it introduced either as plaintiffs' or defendants' exhibit. [181]

The Court: Sometimes counsel, without stipulation, hesitate to offer certain proof.

Mr. Huebner: I think, your Honor, we will defer offering it until further proof.

The Court: Very well.

Q. By Mr. Huebner: Mr. Boyden, where did you get this Bulletin 500?

A. One of our salesmen—no doubt one of our salesmen picked it up somewhere.

Q. And this one here?

A. That came from Mr. Britton.

Q. What is Mr. Britton's full name?

A. William M., I think, Britton.

Q. When did that come to you from Mr. William M. Britton?

A. Oh, a few months ago, three or four months ago.

Q. And what was the occasion of his providing you with it?

A. Well, he came out to California to start to live here. And Mr. Britton sells metal spraying guns in Detroit, or at least he did, the Britton gun, and he came out and called on me to say "How do you do." And we had never met, and I believe he called on others here in the metal spraying indus-

(Testimony of Charles Boyden.)

try, and just introduced himself around through the trade. And while he was there we discussed various things, among which was the patent suit, and while [182] discussing it he volunteered that he thought he had some information, in fact he thought he had some correspondence——

Q. Just a minute. I don't want to interrupt your answer, except to caution you against any hearsay testimony.

A. It wasn't hearsay. This came direct from him.

Q. Well, that would be hearsay, and I don't wish you to make—I don't want you to quote what he said. I just want you to tell the circumstances of your receiving it, what you yourself observed, and how you happened to get it.

A. He brought it to me.

Q. And when did he bring it to you?

A. Well, I wouldn't know. I really don't know. It was some time ago. It was some time ago.

Q. Have you ever had in your possession any other copies of that same bulletin?

A. Oh, yes. That was shortly after the Metalspray gun came out.

Q. The bulletin came out shortly after the Metalspray gun came out?

A. I say I had one shortly after the Metalspray gun came out.

Q. Where did you get that one that you had in



(Testimony of Charles Boyden.)

your possession shortly after the Metalspray gun came out?

A. I got it from one of our salesmen—picked it up somewhere.

Q. Do you know who? [183]

A. I don't know. We had three or four men.

Q. You have identified two of these bulletins, one that one of your salesmen picked up, and one that Mr. Britton handed to you?

A. That is the only bulletin I have seen.

Q. Which one?

A. The only one that has been handed to me, as far as I know.

Q. The one I handed you a moment ago, marked for identification, Bulletin 500? A. Well——

Mr. Litzenberg: I think counsel is trying to confuse the witness. There is but the one circular. There may be other copies of it.

Mr. Huebner: I don't want to confuse the witness. I will refer to copies. This particular specimen is the copy which Mr. Britton gave you?

A. If I may ask Mr. Litzenberg if it is, I can answer the question. I don't know how many thousands of those were printed.

Q. Well, I don't want you to confer with counsel while you are on the witness stand. I want to know whether you are able to identify that particular specimen of Bulletin No. 500.

The Court: He answered, "I do not know," already.

(Testimony of Harry B. Rice.)

feature that counsel refers to is an entirely different matter. In oxy-acetylene equipment [193] we always avoid pockets or openings which may permit the accumulation of these combustible gases. In the old Schoop gun or the old Metallizing gun, or in any gun having an entirely enclosed section which is fastened permanently to the rear of the nozzle, it is possible to obtain an accumulation of combustible gases, if the wire is not in the nozzle at the time of the ignition of the nozzle, or if the wire is of a much smaller size than the wire orificer.

Q. I think that may be quite sufficient, unless counsel——

A. I was going to say that it is very seldom that an explosion of that kind is possible.

Q. It is not a common thing?

A. Yes, and we don't like——

Q. May I ask if this company or fictitious firm owned any patents at that time?

A. Not to my knowledge.

Q. Not to your knowledge?           A. No.

Q. When did you first become acquainted with Mr. Lensch and Mr. Leder?

A. After leaving the Metallizing Company, I would say, probably, I think, in the spring of 1931.

Q. Were you ever associated with them in business?           A. You mean thereafter?

Q. Yes. [194]

A. Yes. We made an arrangement whereby we

(Testimony of Harry B. Rice.)

did job and custom work, under the name of the Metal Spray Company.

Q. Was that an incorporation?

A. That was not incorporated.

Q. Who composed that firm?

A. The arrangement might be called exceptional. The Metal Spray Company was registered in the county with myself as the sole owner, except that we were, to a practical extent, partners, that is, Lensch, Leder and myself. Mr. Lensch had the shop, located at 113 Llewellyn Street, the shop and equipment, and Mr. Leder at that time was working there. He supplied the labor in connection with metallizing and spraying. [195] I did the field work, developed applications, obtained jobs and business, brought them in, invoiced the jobs, and collected the money on all of the invoices. The official location of the business was at 113 Llewellyn Street. All of the invoices bore that address and all checks were mailed to that address. After the moneys were collected, we had an arrangement of division whereby I paid Mr. Lensch first the actual amount of money he paid out on materials and then the balance was split three ways between myself and Mr. Leder and Mr. Lensch.

Q. By Mr. Litzenberg: What machine were you manufacturing at that time?

A. At that time they used a gun that they had constructed and which, I think, at that time they

(Testimony of Harry B. Rice.)

also had a patent on. I learned of the patent and that is how I got in touch with them.

Q. How would you designate or identify that machine, if you can say?

A. That machine was a box type of gun. I say box type because I used that term in connection with both the Schoop and the early Metallizing gun. It was a box type of gun very similar in construction to all box types of guns, such as Schoop and the old Metallizing, except for possibly two details. One detail was a different nozzle construction, an unique nozzle construction. And I think that they obtained claims in the patent upon that nozzle. In other [196] respects it was very similar to previous types of guns then used.

Q. I refer to patent No. 1,987,016 to Lensch and Leder, which I believe has been introduced as one of the defendants' exhibits, and will ask you if that patent discloses the machine that you have been talking about.

A. It does not.

Q. It does not?

A. No. It is the previous patent to this.

Q. The previous patent to that?

A. Yes; the previous Lensch and Leder patent to that.

Q. I guess that patent has not been presented on either side. Do you know anything about this patent No. 1,987,016 to Lensch and Leder?

A. I am familiar with it.

(Testimony of Harry B. Rice.)

Q. Will you explain whether or not that gun was being manufactured by Lensch and Leder and distributed by you, if that was the arrangement?

A. At what time?

Q. At the time of which you speak now.

A. Not when I first made the arrangement with them; no.

Q. Do you remember when this was developed?

A. This gun was developed, I would say, in August or September of 1931. It was the spring of 1931 I went with them. I would rather specify it in this way. This gun was developed within six months of the time I entered the [197] arrangement with Lensch and Leder. I am quite certain that would be August or September of 1931.

Q. And the gun, according to the specifications shown in this patent, was actually manufactured and sold by you?

A. Do you want the time?

Q. No. I mean whether or not it was.

A. Yes; it was.

Q. Now, if you can state just briefly, give the period in which that gun was distributed.

A. I will have to go into some detail.

Mr. Huebner: Your Honor, I object to this on the ground it is not material. It doesn't seem to be prior art. The patent speaks for itself. And there were guns made and sold by Lensch and Leder or, rather, the Metal Spray Company, according to that.

Mr. Litzenberg: I am just leading up to the de-



(Testimony of Harry B. Rice.)

velopment which resulted in the present gun and its development which was later patented. That makes a connecting chain, showing the true history and development.

The Court: You may answer.

A. Will you repeat the question, please?

(Question read by reporter.)

A. It was developed in August or September, 1931. The first of this series was sold, as my memory serves me, shortly before Thanksgiving of 1931. It was not circularized or offered to the general trade until the spring of [198] 1932.

The Court: We will take a recess until 2:00 o'clock this afternoon.

(Whereupon a recess taken until 2:00 o'clock p. m. of this day, Thursday, May 2, 1940.) [199]

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Afternoon Session  
2 O'clock.

(Parties present as before.)

Mr. Litzenberg: We will recall Mr. Rice.

HARRY B. RICE,  
recalled.

Direct Examination  
resumed.

Q. By Mr. Litzenberg: Mr. Rice, this morning you referred to the first patent taken out by Lensch

(Testimony of Harry B. Rice.)

and Leder. I will ask you to look at that patent and state whether or not that is the first patent ever taken out by Lensch and Leder so far as you know.       A. Yes, sir.

Q. Is that the one to which you referred this morning?       A. That is the one.

Q. Was that gun ever manufactured to your knowledge?       A. Yes; it was manufactured.

Q. To what extent?

A. Two or three models.

Q. It was never manufactured for sale?

A. I don't think any of them were sold. They were used in the shop in custom work.

Mr. Litzenberg: It might be well to introduce this copy of the Lensch patent No. 1,776,332, issued September 23, 1930, for a metal spraying device. I ask that it be [200] marked as a defendants' exhibit.

The Clerk: Defendants' Exhibit L.

Mr. Huebner: May I ask for what purpose the patent is offered in evidence?

Mr. Litzenberg: Just to connect the three different patents issued.

The Court: In the development of the art, I suppose. Is that it?

Mr. Litzenberg: Yes.

The Court: Very well; it may be admitted.

Q. By Mr. Litzenberg: When court adjourned this morning, Mr. Rice, you had been describing the spray gun as covered in the second patent and

(Testimony of Harry B. Rice.)

I believe it was referred to as Model No. 125. To what extent was that model manufactured for sale?

A. Well, the purpose of manufacture was to bring out the sale of the gun. It was handled in the customary manner and photographs were taken of it, especially of the gun disassembled. A photograph was taken in order to make a parts sheet and photographs were made to make cuts in order to print a circular, to support the circular that I got out for it.

Q. In other words, it was offered to the market or on the market? A. Yes.

Q. To the trade? [201]

A. Yes.

Q. Did that gun give complete satisfaction if you know?

A. No. It was apparently very satisfactory for awhile, as it was put into the field.

Q. What, if any, objections developed in connection with it?

A. Do you want me to describe them in detail?

Q. Oh, yes; just point them out generally.

A. The first gun manufactured by Lensch and Leder, as I think I said before, was a box-shaped gun similar in general design to the Schoop gun and of the old Metallizing gun.

Q. You are referring now to Defendants' Exhibit L, just introduced? A. Yes, sir.

Q. But I am referring now particularly to Defendants' Exhibit K, which is the second patent.

(Testimony of Harry B. Rice.)

A. If I may have these copies, I can explain it. The first gun was a box-shaped type of design, whereby the rear of the nozzle opening was directly connected with the gear case, which to my mind was objectionable in the sense that it would permit the accumulation of gases. For that reason I strongly advocated a gun whereby the nozzle would be removed, or the rear of the nozzle, rather, would be removed, from an opening into the gear case. In other words, I term it outside wire feeding wheels. I strongly advocated the [202] use of outside wire feeding wheels and suggested that it would be quite simple to run a shaft through the case and apply feeding wheels thereto and move or separate the nozzle from the case. The second gun brought out effected both changes quite satisfactorily at the time.

Q. Were any objections developed in connection with the second gun?

A. The objections developed to the second gun, after it had been in the field for six months or a year, were the fact that the outside wire feeding wheels were supported only on one side of the case. I thought it would be an excellent idea to incorporate a bearing on the outside or, rather, on both sides of the wire feeding wheels. And the second objection was the fact that in the Model 125 gun—I don't know what exhibit this is—the tension spring used to exert pressure on the upper wire feeding wheel in order to hold the wire in feeding

(Testimony of Harry B. Rice.)

position was a fixed spring tension and not subject to manual variation.

Q. By The Court: A screw adjustment?

A. Yes, sir. It was not subject to it. With the various wires that were used, that would cause sometimes slippage as between lead and steel. It might work all right with steel but might gouge lead and so forth.

Q. By Mr. Litzenberg: I think that might be sufficient for that. In connection with the sale of that machine, what next was done in the way of the final machine, [203] the development of the machine, which is now sold and which is the subject of the patent in suit?

A. That introduced another step from this gun to Model 126.

Q. Yes.

A. Messrs. Lensch and Leder made the changes and brought out the Model 126, incorporating an outside bearing on the feeding wheels, keeping the rear of the nozzle separate from the gear chamber and, in addition, effecting a much better balanced gun.

Q. I hand you a copy of the patent in suit, which I believe you are describing at the present time.

A. Yes, sir.

Q. And I will ask you just to state briefly something of the improvements and the time that they were developed, if you can, improvements which led to the production of that gun.



(Testimony of Harry B. Rice.)

A. Comparable improvements with the older gun?

Q. Yes.

A. One thing I liked very much was the elimination of grease cups, the elimination of outside grease cups.

Q. When was this new gun developed, about when?

A. The gun that is in suit?

Q. The gun of the patent in suit.

A. This gun was developed, based upon memory, which has been checked recently by some correspondence I have [204] found, and as I would estimate, in December of 1923 or January of 1934. By that I mean the first model of the gun.

Q. Tell just a little bit about the building of that first model, how it was brought up to the place where it was ready to submit to the public.

A. Do you mean from that point on, from the first model on?

Q. Yes.

A. From the first model on the customary practice was observed of testing in the shop particularly to obtain gas consumption ratios compared with the previous gun to find out the proper pressures to use on oxygen, acetylene and air, and the volume of deposits, the volume of metal deposits. All this information was necessary for me to write a manual of instructions which had to accompany the gun. I would state that these tests went on for probably 30 days and then probably we all agreed

(Testimony of Harry B. Rice.)

Q. And do you happen to know from anything appearing thereon to whom that letter was sent?

A. Yes.

Mr. Huebner: Just a minute. I object to the question in the form it is, that is, whether it has anything on the letter. If the question is does he have a personal [207] recollection as to whom the letter was sent, there will be no objection.

The Court: That is a proper limitation.

Q. By Mr. Litzenberg: Do you have personal knowledge or recollection to whom that letter was sent?

A. Do you mean a specific person?

Q. Yes. A. No.

Q. That particular letter there?

A. Well, without reference to the letter——

The Court: Or any of them particularly.

A. Yes; I know where most of the letters were sent.

The Court: We want the names and time now. That must be exact.

Q. By Mr. Litzenberg: Please state to whom that letter was sent.

A. It was sent to Mr. Britton.

Mr. Huebner: Do I understand the witness testifies he knows of his own knowledge, without reference to this copy, that this particular specimen went to Mr. Britton?

A. May I ask for information?

The Court: Yes.

(Testimony of Harry B. Rice.)

A. I don't know except for the fact that I have a longhand note on the bottom of this letter. Otherwise, I would not know this letter was sent to Mr. Britton.

Q. By The Court: Does the memorandum which you made [208] in your own handwriting, which appears, as you say, on the letter, refresh your memory so that you can be certain about it?

A. Yes, sir.

The Court: Very well.

Q. By Mr. Litzenberg: That letter is signed by your original signature, is it? A. Yes, sir.

Q. And there is an original memorandum in your own handwriting on that letter, is there?

A. Yes, sir.

Q. Will you please read the memorandum to which you have referred?

A. "Mr. Britton: Under another cover, by airmail, am sending essential pages of the manual. The complete manual is going forward by regular mail." [209]

Q. In this letter is there referred to any other document other than what you have just read, which was sent with the letter?

Mr. Huebner: Objected to as incompetent. The letter speaks for itself.

The Court: Yes.

Q. By Mr. Litzenberg: There is reference in that, I believe, to a bulletin. Will you please state what that reference is?

(Testimony of Harry B. Rice.)

Mr. Huebner: I am going to object to this unless the letter is offered in evidence.

Mr. Litzenberg: I am going to offer the letter in evidence.

Mr. Huebner: I am objecting to the question on the ground that it is incompetent.

The Court: You are asked if it is referred to. That is the question. Just read it, please.

(Question read by the reporter.)

A. Yes.

Q. By Mr. Litzenberg: Will you state what document is referred to? A. Bulletin 500.

Q. Do you have copies of that Bulletin 500?

A. I have one.

Q. Will you produce it?

Mr. Litzenberg: I believe there is one here that was [210] with the letter yesterday.

The Witness: I have one.

Q. By Mr. Litzenberg: Is that the document referred to in this circular letter? A. It is.

Mr. Huebner: Just a minute. Please don't answer so quickly.

The Witness: I beg pardon.

Mr. Huebner: Because I want to get an objection in. I object to that question. I would like to have it read, because I want to enter a specific objection.

The Court: Very well.

(Question read by the reporter.)

Mr. Huebner: I object to that on the ground that it is irrelevant and immaterial, unless the question

(Testimony of Harry B. Rice.)

is limited to whether this particular copy that the witness has produced is the copy which went with the letter.

The Court: I will allow him to answer yes or no, and we will see.

Mr. Litzenberg: I believe he already answered that it is.

The Witness: Yes.

Mr. Litzenberg: If the court please, the same circular which was presented yesterday in the discussion and marked Exhibit 15 for identification was the——

Mr. Huebner: Just a minute. I object to counsel [211] starting to testify and prompting the witness.

Mr. Litzenberg: I was going to simply state that this was the document furnished to me with the letter when the matter was brought to me. They were coupled together. All of these circulars are identically the same, all from the same print. Now, if counsel is going to contend that the specific circular which was sent with this specific letter is necessary, then, from the best evidence we have, this is the one which went with the letter and which was furnished by Mr. Britton with the letter.

The Court: I suppose his point is that you would have to ask that the original be produced that was sent.

Mr. Huebner: That is my point.

The Court: I will sustain the objection.



(Testimony of Harry B. Rice.)

Q. By Mr. Litzenberg: Are you in a position to tell, Mr. Rice, whether or not that circular marked 15 for identification was the circular sent with this letter which you have identified?

A. These are not the same.

Mr. Huebner: May I have that question read, and the answer, your Honor?

The Court: The answer is, "These are not the same."

Q. By Mr. Litzenberg: What makes you think they are not the same? Is there any difference in the composition, or is it something else?

A. I think this is the circular I produced. [212]

Mr. Huebner: You are holding in your hand one which has not been marked?

A. Which I produced. This is the exhibit. This is the exhibit here. I don't know where I got this circular. It is not identical with this.

Q. By Mr. Litzenberg: In what respect?

A. It is a later print.

Q. Is there any difference in the composition?

A. This was put out—this was issued at a much later date by Metal Spray Company, Inc.

Q. Will you please explain at this point the difference between Metal Spray Company and the Metal Spray Company, Inc.?

A. In 1935, September 17th, to be exact, the Metal Spray Company, unincorporated, the previous company, was taken over by the Metal Spray Company, Inc., a corporation, formed by Mr. Martin

(Testimony of Harry B. Rice.)

and myself. This purports to be, this circular which I produced here from my portfolio, is a reprint, a copy of the original circular, with the name Metal Spray Company, Inc., attached thereto.

Q. And is that the only difference?

A. That is the only difference.

Q. And the first Metal Spray Company was the fictitious name; is that correct? A. Yes, sir.

Q. Are you in a position to say that the circular which you have just presented was the one presented with [213] the letter, or is it the other circular?

A. This circular is the one presented with the letter.

Q. The circular that was issued by the Metal Spray Company, the fictitious name?

A. Correct, yes, sir.

Q. That was sent with the letter?

A. That is a correct copy of Bulletin 500, which was sent with the general letter. Does that answer the question?

Q. Yes. What is shown on that circular, what gun? A. The model 126.

Q. Is that the gun that you referred to a while ago when you were testifying in regard to the completion of one of the first guns of the new model?

A. Yes, sir.

Q. Did you have anything to do with the printing of that circular and the photographing of the gun?

(Testimony of Harry B. Rice.)

A. I composed the circular and arranged the cuts in the illustrations.

Q. So of your own knowledge that circular was prepared, and the photographs taken from the first gun produced?

Mr. Huebner: The witness didn't so testify, and again Mr. Litzenberg is leading the witness, and it is his own witness, your Honor.

The Court: Read the question, please, Mr. McClain.

(Question read by the reporter.) [214]

The Court: Answer the question. From your own knowledge, of what gun was that a photograph?

A. From my own knowledge, the photographs contained in Bulletin No. 500, this circular, were taken from one of the first models of this type of gun produced.

The Court: Which one?

A. The model 126, the gun which is in suit.

Q. By Mr. Litzenberg: I notice those circulars are marked "Copyrighted." Will you please explain what, if anything, was your practice in regard to issuing circulars?

Mr. Huebner: That is objected to as irrelevant and immaterial, unless the question is confined to what he did in respect to this particular circular.

The Court: Sustained.

Q. By Mr. Litzenberg: Is that document copyrighted?      A. Yes, sir.

(Testimony of Harry B. Rice.)

Q. When was it copyrighted? A. In 1934.

Q. Did you usually copyright your circulars?

Mr. Huebner: The same objection.

The Court: I will allow him to answer as to whether in that respect the act of copyrighting was special in this case. Was it special or a general practice? A. General practice.

Mr. Litzenberg: That is all I wanted, that it was general practice to copyright their special circulars.

[215]

Q. By Mr. Litzenberg: Now, in handling your business, did you have a dealer in San Francisco?

A. Yes, sir. What year? Pardon me.

Q. Back in 1934? A. Yes, sir.

Q. Who was that dealer?

A. DeLaval Pacific Company.

Q. Did you have any correspondence with them at this time in regard to the new gun which had been developed, and which—— A. Yes, sir.

Mr. Huebner: Just a minute. Please don't answer so quickly.

The Witness: I will try.

Mr. Huebner: Counsel hadn't even finished his question. Had you?

Mr. Litzenberg: Yes, just about.

Mr. Huebner: I object to that on the ground that it is not material or relevant, and is outside of the scope of the amended answer.

Mr. Litzenberg: No. You don't understand what I am leading to. I propose to show by the corre-

(Testimony of Harry B. Rice.)

spondence that this new gun was ready for distribution, that the correspondence was had with this representative in San Francisco, in which correspondence the date is more or less definitely fixed as to when the gun was ready for shipment. [216]

The Court: The objection will be overruled.

The Witness: Repeat the question, please.

(Question read by the reporter.)

A. Yes, sir.

Q. By Mr. Litzenberg: Will you produce that correspondence? A. Yes, sir.

Q. I will ask you, Mr. Rice, just to state and identify the different letters, giving their dates, that are in this bunch of correspondence which you have produced.

Mr. Huebner: Again I object, your Honor. The statement made by counsel at the last hearing and his amendment to the answer, coupled together, permit him to bring to the court's attention, if it is relevant, competent and material, one letter, which the witness has already discussed, and transactions occurring between two people, a Mr. Britton and the witness, Mr. Rice. Now, counsel specifically limited himself to two witnesses, involving transactions between those two people, and there is just the one letter which he says Mr. Rice sent to Mr. Britton, and any of these other letters are outside the issues as framed.

Mr. Litzenberg: Counsel is in error in regard to limiting it to the question of any one letter. I gave



(Testimony of Harry B. Rice.)

the names and addresses of the men who would be presented as witnesses, and this is all in connection with the main transaction which we are undertaking to establish, referring [217] to the same gun. It is very pertinent to bringing out the truth in connection with the whole transaction.

Mr. Huebner: I have the transcript here, if your Honor cares to hear it.

The Court: My general understanding was, when the question was raised, that this was to be brought in as a defense in general, without limiting it to a particular letter or document.

Mr. Litzenberg: Certainly that was the intent.

The Court: That is my understanding.

Mr. Huebner: On page 102 of the transcript, Mr. Litzenberg said:

“The men are here in court at the present time, the sender, writer of the letter, and the man who received the letter.”

Well, the court asked Mr. Litzenberg a question: “That is the only special matter?”

And then it was amplified by Mr. Litzenberg as follows:

“Yes, that is the only special matter. The men are here in court at the present time, the sender, writer of the letter, and the man who received the letter. And they are in the position of those who were offering these inventions to the public and sending out the bulletins which had been

(Testimony of Harry B. Rice.)

prepared for that purpose, and which definitely disclosed the invention that was made the subject matter of an application more than two years afterwards. [218]

“Mr. Huebner: I am asking you to state now, so that we can prepare to meet it, the name or names of individuals whom you say had this knowledge.

“Mr. Litzenberg: Well, Mr. William M. Britton. Mr. Britton, will you give your address?

“Mr. Britton: 1741½ West 46th Street, Los Angeles.

“Mr. Litzenberg: And Mr. H. B. Rice, the man who wrote the letter.”

Who wrote the letter—I will emphasize that. [219]  
Then Mr. Litzenberg:

“Will you state your address, Mr. Rice?

“Mr. Rice: 3835 Pine Street, Long Beach.

“The Court: Those are all?

“Mr. Litzenberg: Yes, sir.”

Mr. Litzenberg: Those were all the witnesses.

The Court: Well, the question is whether you limited yourself to the single letter, is the only question.

Mr. Litzenberg: I certainly didn't intend to.

Mr. Huebner: And further over, on page 103, Mr. Huebner said:

(Testimony of Harry B. Rice.)

“Well, to whom did the particular letter go that you are intending to offer in evidence?”

“Mr. Litzenberg: It was mailed to Mr. Britton, who received it and had it in his possession. And there was a personal note in long-hand, written in ink, addressed by Mr. Rice to Mr. Britton, the letter being signed by Mr. Rice,

“Mr. Huebner: That is the full extent of the material that you propose to offer on this special defense, is it?”

“Mr. Litzenberg: On that particular defense.

“Mr. Huebner: Are there any other defenses that are not pleaded in the answer that you are going to offer?”

“Mr. Litzenberg: No; nothing but what has been specifically stated.”

Mr. Litzenberg: This is all the same defense, absolutely, proving the same allegation. Our contention is that [220] under the new Federal rules of procedure this can be presented and should be presented.

Mr. Huebner: But counsel's statement was in the nature of a bill of particulars, upon which we have relied, and under the new rules a bill of particulars is just as binding upon the party making it as it was under the old federal rules.

Mr. Litzenberg: This couldn't change and can not change your attitude or what you could accomplish if you knew it a month before.

(Testimony of Harry B. Rice.)

Mr. Huebner: That doesn't matter.

Mr. Blount: How do we know?

The Court: I will allow you to make the proof, subject to objection and exception, with the proviso that if the other side needs more time to meet this additional matter, they shall have it, and at the defendants' cost.

Q. By Mr. Litzenberg: Now, Mr. Rice, will you please state, just refer to the letters, giving the dates, from whom and to whom they were written, in these few letters you have presented here?

A. Letter—copy of letter of March 17, 1934, which I wrote to De Laval Pacific Company, San Francisco.

Mr. Huebner: May I suggest, your Honor, that it is somewhat out of order to show the witness a letter and start asking questions about it without offering it to opposing counsel. [221]

The Court: You have a right to inspect it.

Mr. Huebner: We haven't any idea what is in these.

The Court: You can identify the letters, from whom and to whom, and let counsel examine them.

Mr. Litzenberg: That is all I am asking him to do at this time, to state the titles, the dates, and to whom written.

The Court: He may do that.

A. Attention of Mr. George Stoddard.

Q. By Mr. Litzenberg: And the next one?

A. Copy of letter of February 24, 1934, to the

(Testimony of Harry B. Rice.)

same party. Original letter of February 19, 1934, from De Laval Pacific Company to me, to the Metal Spray Company, my attention.

Mr. Huebner: In reference, your Honor, to these purported letters, all but one of them appear to be carbon copies; and they are objected to and any testimony concerning them is objected to on the ground that they are not the best evidence. These carbon copies constitute a mere self-serving declaration and they are not admissible unless the originals are produced.

The Court: The objection is well taken except if it becomes material to show that that office dictated something; not that it was received. I shall have to sustain the objection unless the failure to produce the originals is satisfactorily accounted for. [222]

Mr. Litzenberg: If the witness can give personal knowledge that these are his own personal carbon copies, that he wrote them, and they have been in his possession all of this time, and that he, himself, is producing them, wouldn't they be admissible?

The Court: As I suggested, if it is competent, you may show that they did compose such letters; not that they were sent or received. The record may show they composed certain letters but, of course, the originals are the best evidence, or you may show by the production of the party who received them that they have been lost.



(Testimony of Harry B. Rice.)

Q. By Mr. Litzenberg: I will ask you, Mr. Rice, if these carbon copies are copies which you, yourself, composed. A. They are.

Q. Have they been in your possession all of this time?

A. All of this time is a general term.

Q. Since the time of their writing?

A. No.

Q. Or under your general control?

A. My general control; yes.

Q. I will ask you to refer to the letter, dated March 17, 1934, addressed to the De Laval Pacific Company, 61 Beale Street, San Francisco, for the attention of George Stoddard, and simply read one paragraph, opposite which there is a mark, and which refers to the matter in issue.

Mr. Huebner: The same objection, your Honor. It is not [223] the best evidence.

The Court: How far do you expect to go on that?

Mr. Litzenberg: No further than the contents of this particular letter. And, if the original can be had, we certainly shall be glad to obtain it.

Mr. Huebner: I don't think he is entitled to any part of it any more than he is the whole. One sentence might be misleading.

The Court: If you want to prove that there was work on it at a certain time and that they made certain memoranda in their offices and that there are dates attached by which they can prove dates to show the subject matter that they were working

(Testimony of Harry B. Rice.)

on at that time, you may do so. But we have to stop right there with whatever competency that has. If they sent out a letter to some third person and that person received the letter containing the communication therein, then you have got to either produce that person to have him testify that he received such letter and have him produce the original or say that he has lost the original and that that is a copy of the letter. We have two steps there. The objection on the ground it is incompetent is well taken.

Mr. Litzenberg: This letter is written to a dealer and it was written for the purpose of advising the dealer in regard to the gun which is the subject of the patent in issue. It is just a scrap of evidence, of course, and the [224] personal, first-hand knowledge of this witness as to what he said at that time in that letter. It may be that the original could be had but I know nothing about it.

The Court: Do you think that in the ordinary course of a trial a party could show that he sent out a letter by producing from his file a carbon copy, not the original letter that was sent, and say, "This is a carbon copy from my file"? Do you think that is first-class evidence where an objection is made that it is secondary?

Mr. Litzenberg: No; it is not the best evidence, of course. But the question is whether it can not be entered for whatever value it may have.

(Testimony of Harry B. Rice.)

The Court: I say he may testify that that was a memorandum they made at the time in their own office, which will show they had this subject matter in hand, to whatever extent and pertinency it may go. But then we stop right there.

Mr. Litzenberg: That is the purpose.

The Court: What he said to the other party as a communication is not properly before the court. If he is describing something and he says, "We made that memorandum at the time and it was a part of our office files," he may testify to it. It would show that the subject matter was up.

Mr. Litzenberg: Can the witness then read this particular paragraph on that basis?

The Court: If you want him to.

Mr. Litzenberg: I will ask the witness to read the [225] fourth paragraph from the letter referred to.

Q. By The Court: That letter was dictated, as you say, by you and it was filed in your office at that time, on the date it bears, wasn't it?

A. Yes, sir.

The Court: Very well. You may read it.

A. "There will not be sales made at the old and higher prices, I am sure, but, if there is, you may have the difference. As I said before, I am worried very much about getting your guns sold before the new guns are issued (which will be a week from today) because I know they just will not sell thereafter. I am not concerned about the few old guns we have on hand, as, if necessary, we will arbi-

(Testimony of Harry B. Rice.)

trarily set prices upon special prospective occasions that will sell them and divide the differences or losses between us, but with your guns I will have to stand the loss alone”.

Q. By Mr. Litzenberg: And the date of that letter is what?           A. March 17, 1934.

Mr. Huebner: I move to strike the testimony of the witness, where he quoted from this alleged letter, on the ground that it is incompetent, irrelevant and immaterial. It is incompetent for the reasons which have already been stated. It is immaterial because it is not an offer of a gun for sale and, under the rule which your Honor has made, it could not be so construed because it is not a communication to a third party.

The Court: As to whether it is complete or not or is only a circumstance is a matter to be argued. I will still adhere to my ruling as before but thus far it has been shown they did have an office record referring to certain matters at that time. [227]

It may be only a circumstance tending to show that they did perfect their nozzle at that time. That may be argued for what it amounts to. The motion will be denied and an exception noted.

Mr. Litzenberg: Should this letter be offered in evidence? Do you want it in evidence?

Mr. Huebner: I don't want it offered in evidence.

Q. By Mr. Litzenberg: Mr. Rice, are you familiar with other spray guns that are on the market?           A. Quite; yes, sir.

(Testimony of Harry B. Rice.)

Q. Will you mention some of the guns that you are familiar with?      A. At the present time?

Q. Yes.

A. There is the Metallizing Engineering gun called Metco, made in New York City, the Stevens gun, made in San Francisco, the Valentine gun, made in Los Angeles, the Britton gun, made in Los Angeles, and the Rose-Engles gun, made in Wilmington.

Q. Have you any circulars that show these guns that you could produce?

The only purpose in producing these guns or circulars is to show the general construction of the guns that are on the market and to show that practically all of them are guns that are substantially closed construction.

Mr. Huebner: That is objected to as irrelevant and [228] immaterial unless it is part of the prior art.

The Court: Is that what is claimed for it?

Mr. Litzenberg: No; we are not submitting it as prior art. Counsel, I think, is right so far as pertinency is concerned, other than to show the general construction of the gun is more in accord with the Mogul gun than with any of the other guns that are on the market.

The Court: We don't know who they were copied from. The objection is sustained.

Mr. Litzenberg: That is true. They all copy from the others. You may take the witness.



(Testimony of Harry B. Rice.)

Mr. Huebner: May we have a short recess at this time, your Honor?

The Court: Yes.

(Short recess.)

Mr. Litzenberg: If the court please, I would like to have this Exhibit No. 15, which was marked for identification and was separated yesterday from the letter, introduced with the letter as our exhibit because they were clipped together and should be kept together.

The Court: Very well.

Mr. Huebner: It is objected to as not properly proved and as not the best evidence.

The Court: I will allow it to be filed and an exception may show.

The Clerk: Defendants' Exhibit M. [229]

## DEFENDANTS' EXHIBIT M

Subject: New Type Gun.

Los Angeles, Calif.

April 5th, 1934.

To All Distributors and Agents:

During the past two years we have had many helpful and constructive suggestions from the various territories and from many individual users concerning improvements in design of our guns. At all times we have given very careful consideration to every comment offered, usually we have been able to confirm the results reported by checking in

(Testimony of Harry B. Rice.)

our plant or through local sources. When it has been established that a certain change is desirable and it has been found possible to incorporate same in the present design, we have taken immediate action. Since the Models 80, 125, and 186S were first offered about three years ago there have been a great many improvements and changes applied as a result of experience and field suggestions. As a result, the present models are quite different from the original issues. Even so, several guns sold during 1930 and 1931 are still being used and giving satisfactory service. Of course, many of these models, with improvements cited, are in use in every district which were purchased during the past two years and most of these customers are convinced they have the best gun on the market, are fully satisfied with the results obtained, are good references, and some of them may continue to specify similar models for future requirements. For this reason this type and these models will continue to be manufactured as long as the demand exists.

However, as the result of the many suggestions made and the experience gained, it became evident over a year ago that an entirely new design of gun was necessary to add some of the changes that seemed desirable. It is of course one thing to decide that a certain change in the operation of a device is advantageous; it is quite another thing to be able to incorporate this desirable change into a workable

(Testimony of Harry B. Rice.)

design. Although we are constantly experimenting on new designs of guns we decided early in 1933 that to obtain certain desirable results we would have to completely change the design of our gun, and we immediately began centering all of our efforts to accomplish this result. It is no easy matter to perfect a new design of metal spray gun. The number of drawings, patterns and set-ups runs into figures that it is best not to specify as few would believe. We obtained the final design desired about six months ago and since then have been using it on every type of job possible to check the results and add minor improvements. Although all of these tests and trials have proven fully we have a splendid gun, any one of you has had enough experience to realize that the design *principals* which we have been able to put into this new type answers all previously discovered weak points.

So we feel that you have all contributed in producing the new type gun as described in bulletin 500. And we believe that you will all recognize it as being as far in advance of the older type as our first guns were compared with all competitive guns. You need offer no apologies to any recent purchaser of the older type guns. They have a gun that is distinctly superior to any competitive gun. This is not theory; 68% of our sales since January 1st have been to customers having competitive guns. While

(Testimony of Harry B. Rice.)

over a period of three years there is but one single instance where *on* of our customers has purchased a competitive gun, and that customer openly expresses his regret. We number some of the largest industries as satisfied users and boosters for 1933 models of guns, and we frankly believe some of these will continue to buy the same types. Nevertheless, it is very apparent that the 1934 type will eventually eclipse the older type, and will immediately sell in much greater volume.

In this or previous mail you have received a copy of bulletin 500 and an initial supply for sales purposes. Note that it gives a complete detailed disclosure; nothing needs to be minimized as every detail is a cardinal selling point. You will also note that the materials used in construction are the very best obtainable regardless of cost. Instead of supplying but one worm and one worm gear for each gear reduction change, this type comes with one worm and two worm gears with each gear reduction ratio. This primarily is so that the Assembly 63 & 64 may be fixed in proper position so no bearing adjustments are necessary, but it also actually gives the customer one extra worm gear with Model 81 and two extra with Model 126. It will be about 30 days before triple gear reduction assembly can be supplied with 126. In the mean time it will be found that the double gears will handle lead and tin very

(Testimony of Harry B. Rice.)

satisfactorily but not in as great volume as specified with the triple gear. When the latter are completed they will be forwarded promptly to you or to any customers having purchased 126 guns in the meantime.

The price of the Model 81 Gun Unit is \$440 and Model 126 is \$495. (Note that Gun Units do not include Air Regulators). The price of Air Regulators is \$16. The price of oxygen and acetylene Regulators with 3 20' lengths of hose is \$56. Therefore the price of Model 81 Outfits is \$512, and of Model 126 Outfits is \$567. The prices of \$16 for the Air Regulator and \$56 for the two gas regulators and hose are the established national selling prices of these items by their manufacturers. The Air Regulator is a standard type but with a special size of valve orifice for our guns and therefore must be ordered specially direct from the factory at Chicago. To date we have invariably had trouble or failed to get the best results when the new type gun was operated without this regulator to control fluctuations and keep the pressure at 80 lbs. At least for the present sell Air Regulators with all 1934 guns. Naturally best results will be obtained by selling Outfits complete but if customers have good regulators and use the proper size of hose we have no objections to their buying the Gun Unit and Air Regulator only. The discount or commission on Gun



(Testimony of Harry B. Rice.)

Units is 33-1/3%; on regulators of all types and hose, 25%. The various codes have tightened up trade discounts on regulators and hose to the extent that on this basis less than 10% gross is realized by us for handling. Except to insure that our guns are used only in conjunction with satisfactory accessories, we would prefer not handling these items at all.

Note that Model 81 Outfit at \$512 compared to competitive prices of \$500 per outfit is actually \$4 less since competitors do not supply an air regulator at the \$500 price. You need not hesitate to put the 81 into any competitive situation, especially to old competitive users, as it will spray as fine and in larger volume than any competitive gun. Although the nozzle and combustion chamber of the 1934 type is similar to the 1933 type, a few small changes have been made and a finer spray from each of the new models is the result.

About 75% of the Manual of Instructions has been changed. Manuals will hereafter include the eight page confidential mimeo report applying to bulletin 351, and we believe you will agree the new Manual is more complete in all essential details, giving the purchaser the most practical information available to date.

At least for the present the recent prices on Models 80, 125, and 186S Guns of \$375, \$425, and

(Testimony of Harry B. Rice.)

\$475 will be maintained. Regulators and hose will be \$56 instead of \$50, making Outfits on these Models (without Air Regulators, of course) sell for \$431, \$481, and \$531 respectively. Although this is a raise of \$6 per outfit it is necessary to conform with 1934 accessory prices. A reasonable stock of 1933 models is available. We suggest that these models be offered where price is the paramount consideration. We have a few used models on hand that have been completely rebuilt and bear new guarantees which are available at lower prices as long as they last. None of these were sold and taken back but were used for demonstrating purposes locally.

It is probable that present users of 1933 models will immediately request a trade in allowance on the new models. We can make no provision for taking in either our 1933 model guns or competitive guns on the purchase of the new 1934 models. The margins are much smaller because the cost of manufacture is higher, and the sale prices are lower than the original prices of the older type guns. When absolutely necessary to do so, try to arrange a local trade in on the basis of reselling the old gun. In such cases we may have something to offer or be able to co-operate in disposing of the old gun. Of course, if a customer user of an old type is satisfied and is not in a position to buy another gun it would be poor policy to bring the new type to his

(Testimony of Harry B. Rice.)

attention as it might only cause a desire that could not be fulfilled, and therefore dissatisfaction with his present gun.

We expect to be able to forward parts price lists during the current month and we plan to have these based upon and similar to the gun prices and discounts. We are confident, however, that fewer parts will be sold and practically no gears or worms at all. One of our shop guns has been in almost continuous use for four months and we can detect no wear whatever on the gears. This is not only due to the enclosed type of lubrication, but to the larger size of gears and worms, and particularly to the use of specially hardened and polished worms.

Our competitors are emphasizing process promotion and give the prospect very little if any information relative to their guns, for good and sufficient reasons. We believe proper gun design is paramount, and having by far the best gun we disclose it fully. Now that you have something that will undoubtedly back you up in every issue we suggest a call on every competitive user in your territory and that you place special emphasis on the clear cut superior features of this gun. We have ample stock and can fill all orders on one day notice.

In demonstrating the new models we suggest using zinc, aluminum and bronze, all of which for short demonstration purposes, may be sprayed very satisfactorily with the single gear reduction because of the fact that the turbine has more power and flex-

(Testimony of Harry B. Rice.)

ibility. Of course steel may also be demonstrated but with any gun it spreads more, while bronze alloys and most other metals show a narrow small diameter spray stream that makes a better impression.

We will appreciate your comments and suggestions concerning this set-up and gun, and would like to learn of your prospective program at your earliest convenience. If you will get this product before your prospects with energy and dispatch we are confident your sales in 1934 will increase many times over the past year.

Yours very truly,

METAL SPRAY COMPANY

H. B. RICE,

Mgr.

HBR/md

Mr. Britton—

Under another cover by air mail am sending essential pages of the Manual. The complete Manual is going forward by regular mail.

H. B. R.

[Endorsed]: No. 201-J Civil Lensch vs. Metallizing Co. Defts Exhibit No. M Filed 5-2-40 R. S. Zimmerman, Clerk By L. B. Figg Deputy Clerk.





# METAL SPRAY COMPANY

has developed and now offers  
AN ENTIRELY NEW TYPE OF

## METALSPRAY

### GUN

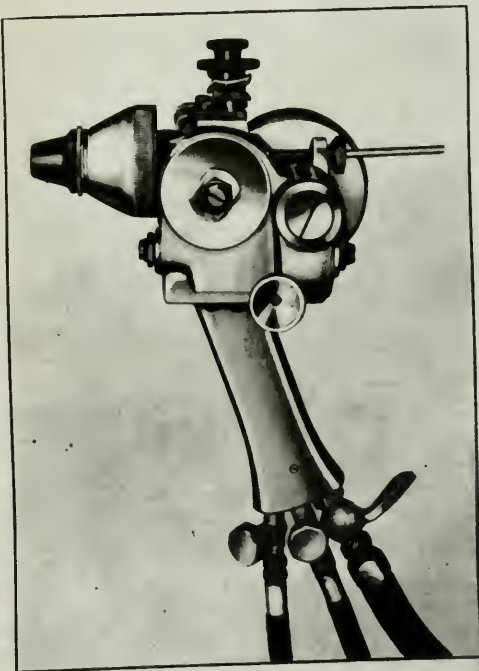
the spraying of all metals in molten form to resist corrosion, replace wear, and perform the many thousands of applications now accepted as good practice.

#### THE NEW METALSPRAY GUN

lighter in weight, easier to operate, requires far less maintenance, is perfectly balanced, and is built to meet the demands of a rapidly growing process.

progress of an industry  
greater than the progress  
development of its tools.  
first Metalspray product  
and completed from former  
lowered costs, opened  
new fields, and its  
were quickly approved  
satisfied users. The  
that made the first gun  
ess are retained, but ex-  
ce and research have per-  
the addition of improve-  
that are easily recognized  
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one interested in metal  
ang will take the time to  
fully the detailed speci-  
s given in the following  
and the reasons there-  
The best tool in this  
is unquestionably the  
and proper selection  
is certainly the biggest  
for success or failure.  
is bulletin covers  
specifications only.  
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types of proven  
ications are covered  
ulletin 351.



Patented Sept. 23, 1930. Other Patents Pending.  
**THE METALSPRAY GUN**  
IN TWO SIZES, MODELS 81 and 126

In view of the fact that metal spraying devices have air turbine speeds varying from 15,000 to 50,000 R.P.M., worm gear reductions varying from 400-to-1 to 1200-to-1, must feed wire metals varying from soft lead to hard steel at accurate and uniform speeds into the oxy-acetylene flames, which in turn must melt the metal without oxydizing, so that the air blast surrounding the combustion nozzle may pick up the liquid metal, atomize finely and instantly impact the molten metal particles onto the surface to be coated at nozzle velocities as high as 40,000 feet per minute; it is obvious that such a tool is called upon to perform a delicate, finely synchronized operation, and to do so efficiently, continuously and economically it must be constructed of the very best materials. Each item must be designed with a full understanding of its important function, and all departments must be combined into a compact, light weight hand tool that will perform accurately under all field and shop conditions.

No. 301-1-Civil  
Lena  
vs.  
Metallizing Co  
P.L.G. EXHIBIT  
No. 15 for ident  
Marked for ident 5240  
R. G. ZIMMERMAN, Clerk  
By J.B. 22  
Dated



# 1. POWER PLANT COMPLETELY SEPARATED FROM COMBUSTION UNIT.

Although the results of each must synchronize fully, if combined in operation each disrupts the efficiency of the other. For example: When the wire is fed through the gear case, as in some types of guns, the wire nozzle channel must fit too closely around the wire to permit free feeding at all times, and the wire must be placed in this wire channel before lighting the nozzle; otherwise the highly combustible gases may collect in the gear case and, when lighted, may seriously damage the gun. Metalspray places the combustion chamber separate from the gear case, with the rear of the wire nozzle channel fully open to the atmosphere; therefore no gases can collect, the flames may be lighted prior to introducing the wire into the nozzle, if desired, and the wire channel may be as much as 1/32" larger than the wire, eliminating binding and clogging as well as permitting the use of large commercial type wire of inexact or non-uniform size. Therefore, either continuous coils of wire may be used or short wire pieces or rods fed continuously, one after the other — an exclusive feature with Metalspray.

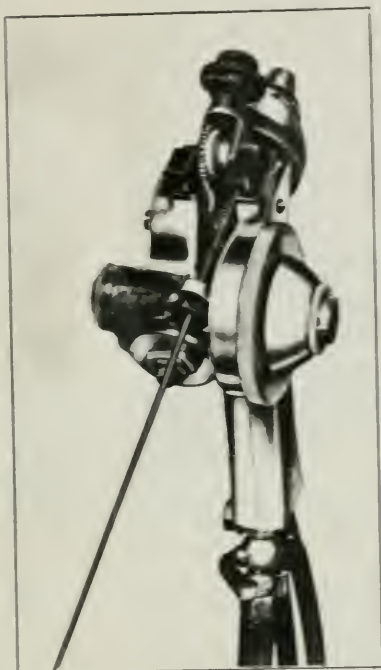
# 2. PATENTED NOZZLE PERMITS QUICK AND CORRECT ADJUSTMENT OF FLAME AND REDUCES BACKFIRE TO THE MINIMUM.

This feature, combined with the above described condition, permits the use of as large as 1/4" dia. wire in all metals, which gives several times greater volume of deposit, much lower cost, a fine spray, and a dense deposit. The one-piece nozzle has a special nickel-copper alloy tip, and but one nozzle is used for all metals. Therefore, it is fixed, eliminates changing of nozzles for different sizes of wire, permits the seats to be ground-in and made permanently tight, and reduces to a minimum, seat repairs and gas leaks. Only the air caps, which focus the air upon the molten wire, are changed for different metals.

# 3. INDIVIDUAL VALVE CONTROLS FOR ACETYLENE, OXYGEN AND AIR, COMBINED WITH THE PATENTED NOZZLE, PERMIT QUICK ADJUSTMENT OF THE CORRECT NEUTRAL FLAME, AS WITH A WELDING TORCH.

Metalspray guns can be lighted and properly adjusted in less than ten seconds. Guns requiring a single control valve for all gases invariably require two or three minutes to adjust the flame, and this must be done at the regulators. All experienced oxy-acetylene operators know that to maintain an accurate neutral flame on any device, adjustments must often be made several times per hour. An example of this practice is the individual valves on welding torches which make possible accurate adjustments without loss of time or walking back to the regulators on the cylinders.

# 4. KNURLED WIRE FEEDING WHEELS ARE LOCATED OUTSIDE OF THE GEAR CASE TO OBTAIN VISIBLE CONTROL, PREVENT FOULING AND EXCESSIVE GEAR WEAR FROM THE METAL PARTICLES AND SCALE ON THE WIRE, AND MAKE UNNECESSARY THE OPENING OF THE GEAR CASE TO STOP WIRE FEEDING; THUS FURTHER ELIMINATING ALL POSSIBILITY OF CONTAMINATING THE GEAR CASE LUBRICANT WITH DUST, SCALE AND SAND FROM THE SURROUNDING ATMOSPHERE.



SHOWING UPPER WIRE FEEDING WHEEL RAISED AND EXPOSING EXTERNAL WIRE FEEDING MECHANISM.

# 5. CONTROL OF WIRE FEEDING.

Full manual control of wire feeding mechanism is provided, to exert any pressure desired on the wire feeding wheels, preventing upward of wire and permitting full adjustment in for this large variety of soft and hard metals. This spring pressure may be fixed, and not disturbed by the release and raising of the upper wheel, as per illustration, when it is desired to stop feeding the wire or stop spraying.

# 6. TURBINE AIR IS EXHAUSTED EXTERNALLY TO THE ATMOSPHERE.

Most designs exhaust turbine air into the gear case, which contaminates the gear case lubricant with atmospheric grit, dust and pipe scale. External air exhaust gives greater turbine power and flexibility.

# 7. GEAR CASE COMPLETELY CLOSED AND PACKED WITH LUBRICANT, AS WITH AUTO TRANSMISSION AND DIFFERENTIAL ASSEMBLY, ELIMINATING THE NECESSITY OF GREASE CAPS, OILING, LUBRICATION, AND KEEPING THE GEAR CASE ENTIRELY FREE FROM CONTAMINATION WITH GRIT, SCALE, DUST AND SAND ALWAYS ACTIVELY PRESENT WHEN SPRAYING.

The gear case contains two sets of worms and worm gears which reduce the turbine speed as much as 1200-to-1. Since this design permits the maximum of lubrication, adjustments for wear, and replacements, are obviously reduced to the minimum. It is only necessary to lubricate with oil at the external wire feed wheel bearings daily. Form-rings must have regular full lubrication of bearings every few hours, and complete cleaning of gear case daily. Parts of the gear case are instantly available by screwing out the gear retainer cap desired, and without changing gears, worms, changing or inspection, when the cap is returned to position, no adjustments are necessary, as the bearing positions are undisturbed.

# 8. TURBINE AIR CONTROL VALVE AND ALL OTHER CONTROLS ARE ON ONE SIDE OF GUN SO THAT, MAY EASILY BE OPERATED WITH ONE HAND.

After the gun is lighted and spray started the control valve may be turned to the left to regulate the supply of air to the turbine, which in turn varies the wire speed. If the pressure is constant, the wire speed is constant, and the wire feed is uniform, the power plant, however wire speed is set, will maintain movement of the wire at constant factors mentioned often vary many times in an hour of spraying, and since a variation in wire speed immediately results in a change in type of deposit, it is essential to have the turbine air valve instantly available and easy to reach with the control hand. Many types of guns have this valve, for convenience of design, on the same side as the turbine, while other controls are on opposite side, which is an awkward arrangement for the operator.

# 9. MATERIALS USED IN CONSTRUCTION.

Gun case is of cast nickel-aluminum alloy. All bearing retainer caps, the turbine, and air cap base are of stainless steel. All worm gears, worm wheels and steel wire feed wheels are of specially hardened part of steel. All bearings are of the very best of bronze and ball bearings chosen are of American stock. The worms are made from a 28 inch diameter stainless steel, and are hardened, with the flywheels. The gears are made from the same, thereby ensuring extremely durable construction.





## WIDE RANGE OF PROCESS

Metalspray covers a remarkably wide range of applications, possibly greater than any process. A job shop may use it upon one day to spray zinc on paper or copper on electrical contacts, and the next day undertake the deposition of a ton of aluminum on a gas holder. Furthermore, it may be necessary to build up a small bearing with an ounce of stainless steel, and in the same day begin increasing the diameter of an enormous steam pipe by spraying 100 lbs. of steel. In all industry, it may be the manufacture of trucks or tooth brushes, and it may be similar, but various sizes of each are available for different classes of work. The thickness of metal spraying is true of metal spraying. One size of gun with the size of turbine, gears, case and combustion chamber handle 1/8" dia. wire efficiently if built for 1/16" more than a roadster can be converted into a five-ck. Therefore, the identical design of gun described in built in two sizes. Some industries will desire one size; most users will find one size suited to their requirements.

## TWO SIZES OF GUNS

**Model 126** sprays all metals in 1/8" dia. wire. It has great capacity of any standard hand gun on the market, lays a remarkably fine, dense deposit. .003" of either aluminum, or .006" of lead is impervious to atmospheric corrosion. Model 126 is particularly suited for the deposits necessary in building up machine parts before the time saved and low cost. 6 lbs. of steel may be deposited in one hour at time and materials cost of 75¢ per lb. soft metals, such as lead, tin, zinc or soft aluminum may be used in coils or reels; hard, stiff metals, such as steel and steel alloys, are used in straight rods of any length, and one is fed after the other without stopping continuous spraying. Gun weight 3 1/2 lbs.

**Model 81** sprays all metals in 12 gauge Brown & Sharpe (.081" approx.). It has a smaller turbine, gear nozzle, etc., than Model 126 and weighs but 3 1/4 lbs. Its spraying capacity is large for the size of wire used, but of course, not as economical for heavy deposits on large parts as the larger gun. Model 81 produces a very fine spray and probably a more dense deposit than any hand gun now on the market. All metals to be sprayed may be used in coils or reels.

**COMPRESSORS, REGULATORS, HOSES.** Metalspray guns use various types of oxygen and acetylene depending upon the melting temperature of the metal to be sprayed. Maximum pressure of acetylene is 15 lbs. for the ordinary types of welding and cutting regulators often unsatisfactory for spraying but the latest types of oxygen regulators are satisfactory. One of the best types is recommended for Metalspray guns and the operating pressures when used are determined with this type. All hose used must be of the same size and length to maintain the pressure recommended by the gun maker and resistance hose of 1/2" dia. air hose 1/2" dia. If greater than 25 ft. lengths are used pressure drops must be made.



Using Brown & Sharpe Design with Model 81 Gun.

Model E-126B is illustrated and is of characteristically type of specially built guns for special purposes. It uses electric power to straighten and feed 1/2" dia. lead, tin wire of aluminum to the spraying head. Several rays have been built for spraying gun on exterior areas of steel boiler barrels lead lining of tanks, and applying aluminum on interior of boiler chambers.

Another model is E-123, which applies 1/2" dia. high carbon steel wire in coils to 100 ft. run a brake drums averaging 18 lbs. per hour. These guns weigh from 25 lbs. to 150 lbs. and are fastened to and operated in conjunction with special automatic handling machines. As they are special in purpose and design they are only built upon special order. Metalspray Specially Built Production Guns no doubt have the largest capacity of any guns in successful operation obtain the maximum in economy are fully automatic but usually apply only for large volume spraying on a production basis. Inquiry solicited.

## SPRAYING CAPACITIES

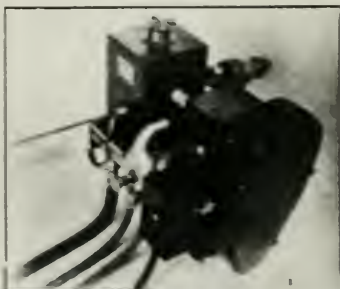
		Lead and Tin	Zinc	Aluminum	Brown Iron	All Types of Metal and Model
Pounds Sprayed Per Hour	Model 81 Gun	25	14	4	6	3
	Model 126 Gun	40	22	7	13	6
Square Feet Coated .001" Thick Per Hour	Model 81 Gun	200	350	240	150	75
	Model 126 Gun	*400	*500	420	275	150

\* (Although an operator cannot cover such large area in one hour the unit of .001" is given for estimating only thicker coatings are necessary for most practical purposes. Edge and spraying losses are not included as they vary with the objects sprayed.

The figures given are average, not maximum. Under ideal conditions, these volumes have been exceeded over 25%. Note that pounds of metal deposited per hour is the basis used. Estimates based on "coats" are inaccurate, as the thickness of a coat varies directly with the speed of oscillation of the gun and, therefore, with the method of the operator. Thickness of deposits for useful purposes range from 1/1000 of an inch to one inch (.001" to 1.000"). Amounts to apply for various purposes are outlined in other literature and in the Manual of Instructions. Thicknesses desired are obtained by first learning the weight of the spraying metal per square foot from any plate or sheet catalog, or engineering handbook, and weighing out sufficient wire to obtain the specified thickness, based on the area to be coated. Allowance must be made for spraying losses as specified for the various metals in the Manual, as well as edge losses determined by estimate and based on the form and size of the object to be sprayed. An experienced operator will obtain 90% uniformity of thickness by hand operation and probably 99% uniformity when the gun is attached to the tool rest of a lathe in spraying shafting, or in other semi-automatic spraying operations.

**AIR COMPRESSORS, REGULATORS.** Metalspray guns require air at 80 lbs. pressure and from 50 to 75 cubic feet per minute volume depending on the size of gun and the metal sprayed. It is most important that the volume be sufficient and that the pressure does not vary over five pounds. A special type of air regulator has been developed for these requirements and this regulator should be used with Metalspray Guns at all times.

For general applications an air compressor of a minimum actual delivery of 100 cu. ft. per minute at 100 lbs. pressure should be used. This is actually larger than necessary for gun operations but is no larger than necessary for proper sand blasting. Metalspray guns do not require special air scrubbers or filters but if the air carries excessive amounts of oil or water crutch drip pots should be installed in the line to assist in condensing and eliminating same only because the sand blasted surface to be sprayed may become contaminated and the hand injured. The Metalspray gun will operate regardless of excessive amounts of oil or water in the air.



Example of Special Built Gun for Special Purpose.

## WIDE RANGE OF APPLICATIONS AND GUNS





With the aid of the Manual of Instructions, any average mechanic can learn to operate Metalspray guns within a few hours, figure costs and develop applications. Metalspray users receive full co-operation in developing any particular application, based upon wide experience and data accumulated from thousands of successful jobs performed by Metalspray and by Metalspray users in many large industrial plants. Bulletin 351 gives detailed data on some of the approved and accepted applications.

### Metalspray Gun UNITS Include:

- 1—Metalspray Gun, Model 81 or 126 (specify either model—see page three for detail specs.) with 3 Air Caps, extra Worms and Gears, 3 Wrenches, 1 large tube Lubricant, 1 Lathe Attachment, 1 Lighter, Hose Connections, Manual of Instructions and hardwood Box Container. (Shipping wt. 15 lbs.)

It is quite essential that a special air regulator of Metalspray design be used with the above unit, to control fluctuations and pressures and obtain the proper volume of air. This specification is—

- 1—Special Type Air Regulator with line gauge. (Shipping wt. 7 lbs.)

Quotations are made on Metalspray Gun Units and Air Regulators separately.

In addition to a Metalspray outfit, a user will require air supply of volume and pressure previously specified, pressure type sand blast equipment, sharp, angular silica sand (or steel grit) of from 16 to 30 screen size, oxygen, acetylene and metals in wire form of size specified for the model of gun desired. All of these items are readily available from local sources of supply or inquiry to Metalspray will bring detailed information as to sources, costs, and types best suited.



Model 126 Attached to Tool Rest of Lathe, Spraying  $\frac{1}{8}$ " Dia. Monel on Shaft to Increase Diameter.

### Metalspray OUTFITS Include

- 1—Metalspray Gun, Model 81 or 126 (specify either model—see page three for detail specs.) with 3 Air Caps, extra Worms and Gears, 3 Wrenches, 1 large tube Lubricant, 1 Lathe Attachment, 1 Lighter, Hose Connections, Manual of Instructions and hardwood Box Container.
  - 1—Special Type Air Regulator with line gauge.
  - 1—Two stage, Two Gauge Oxygen Regulator with wrench
  - 1—Two Gauge Acetylene Regulator with adaptor.
  - 2—20 ft. lgths. 3/16" dia. Oxygen and Acetylene Hose.
  - 1—20 ft. lgth. 3/8" dia. Air Hose.
- (Total shipping weight 45 lbs.)

Concerning regulator and hose requirements and purposes, refer to detail specs. on page three.

Write for detailed information advising fully as to the class of work to be performed. Your inquiry will have the immediate attention of experienced engineers.

## METAL SPRAY COMPANY

MAKES ACTUALS

EQUIPMENT

METALSPRAY GUNS

SERVICE

113 LLEWELLYN STREET

LOS ANGELES, CALIFORNIA



(Testimony of Harry B. Rice.)

Q. By Mr. Litzenberg: Mr. Rice, just one or two more questions. In regard to this machine and when it was completed, the one from which you made the circulars, when did you say that machine was practically completed, ready for demonstration?

A. In December, 1933, or January, 1934.

Q. Did you display that machine to anybody in its finished form?           A. Yes, sir.

Q. To whom?

Mr. Huebner: Just a minute. I object to this line of examination. It is going out in another direction, your Honor, outside of the scope of his bill of particulars as stated in the record.

Mr. Litzenberg: It is simply to show he took this same machine to San Francisco and exhibited it to this agent.

The Court: I will allow it to be answered and an exception may show.

Q. By Mr. Litzenberg: To whom was the gun displayed?

A. The DeLaval Pacific Company.

Q. Where are they located?

A. In San Francisco.

Q. About what time was that?

A. I will have to refresh my memory.

Q. From what? [230]

A. From the letters in the file. I displayed the gun to Mr. George Stoddard on the Friday preceding February 19, 1934.

(Testimony of Harry B. Rice.)

Q. That was one of the completed guns?

A. Yes, sir.

Q. Do you recall whether you exhibited it to anyone else?

A. I might have but I don't think so at that time. Was that your question?

Q. Yes. Was the gun offered for sale then?

Mr. Huebner: That is objected to as calling for a conclusion of the witness.

Mr. Litzenberg: He knows. He was the salesman.

Mr. Huebner: Ask him what was done.

The Court: Just tell what was done.

A. The gun was displayed to Mr. Stoddard in order to aid in convincing him that he should cancel his distributing agency at that time so I could give the distribution to other parties, showing—or I should particularize. The question of the cancellation involved my taking back four old-style guns at their cost. And the purpose of displaying the gun was to convince the distributor that they might not be able to sell the four old-style guns prior to a general announcement of the new gun.

Mr. Huebner: I move to strike the testimony of the witness on the ground it is not responsive to the question. [231] He is only, as I understand it, permitted to state what occurred and not his conclusions or observations or general purposes.

The Court: I think that is correct. What was done, is the point.



(Testimony of Harry B. Rice.)

Mr. Litzenberg: The witness has simply explained that in connection with exhibiting the gun.

The Court: I wouldn't go too deeply into his reasoning on it. What was done? If a question arises as to the plausibility of that, then he may give reasons.

Q. By Mr. Litzenberg: Was that agency established? A. Which agency?

Q. With this San Francisco concern.

A. The new agency was established.

Q. At that time? A. Yes, sir.

Q. And that was in what month?

A. That was in February, 1934.

Q. Do you know whether or not that gun had been patented, this new gun that you were now exhibiting?

A. I know it had not been patented.

Q. How do you happen to know that it had not been patented?

A. I was informed by Lensch and Leder that their patent attorney at that time had not considered the features of sufficient uniqueness to obtain a patent; that only mechanical [232] skill and ingenuity was involved.

Q. Did you raise the question at any time with anybody in regard to a patent application?

A. On this gun?

Q. Yes. Or did anybody raise the question with you in regard to patenting it?

A. Later on Mr. Martin did.

(Testimony of Harry B. Rice.)

Q. Will you tell just what took place?

A. During the summer of 1935, Mr. Martin and I were negotiating to incorporate the Metal Spray Company and prior to that incorporation he examined the patent structure and mentioned to me on several occasions that the gun could still be patented or that a patent could still be applied for at that time.

Q. When was that?

A. That was in the summer of 1935. He further discussed the matter in the fall of 1935.

Q. Was anything done, to your knowledge, at that time?      A. Not to my knowledge.

Q. That was in the fall of 1935?

A. Yes, sir.

Q. Do you know anything about any further steps in regard to the patent application?

A. The matter was discussed with me by Mr. Martin on several occasions, extending from the summer of 1935 up to the date of application. The question discussed was as to [233] the first sale or first onsale or first display of the gun or circular. I was asked repeatedly as to the time of first display of the gun or circular.

Q. Was the definite question raised as to the two-year period?      A. Yes, sir.

Q. Who raised that?

A. I am not—by the question raised as to the two-year period, I assume that you mean the two-year period for application?

(Testimony of Harry B. Rice.)

Q. Prior to the filing of the application.

A. It was discussed on several occasions.

Q. Did you give any warning that the time was short?

A. During discussion in the summer and fall of 1935 I expressed myself as of the opinion that the application could safely be filed in December of 1935 or January of 1936. I was very much in doubt concerning the matter after that time.

Q. Do I understand that this machine was actually in use in the shop in March?

Mr. Huebner: Just a minute.

The Court: Yes. That is leading.

Mr. Litzenberg: That is right.

Q. By Mr. Litzenberg: Was your machine used in March?           A. March of what year? [234]

Q. 1934.

A. It was used in the custom shop for tests for job work on a number of occasions in March, yes, sir.

Q. Was it used after that?

A. It was used after that.

Q. On regular job work?           A. Yes, sir.

Q. Did it give satisfaction, so far as your knowledge goes?           A. Yes, sir.

Mr. Litzenberg: I believe that is all. You may take the witness.

(Testimony of Harry B. Rice.)

Cross Examination

Q. By Mr. Huebner: Did you finally agree with Mr. Lensch and Mr. Leder that the gun, Plaintiffs' Exhibit 5, was probably patentable?

A. I didn't express any opinion as to its patentability in this letter.

Q. You knew, did you not, that Mr. Lensch and Mr. Leder did file the application which matured into the patent in suit? A. I did.

Q. And at the time they filed it you were affiliated with them, in a business way, weren't you?

A. Are you speaking of the gun that is in suit?

Q. Yes. [235]

A. At the time of filing the application—I think it was in April of 1936—the affiliation consisted of a distributing contract with the Metal Spray Company, Inc., of which Mr. Martin was president and I was vice-president. Is that responsive? I was not directly affiliated with them.

Q. At the time they filed the patent application in April of 1936, you were vice-president of the Metal Spray Company? A. That is right.

Q. And the Metal Spray Company was at that time, to your knowledge, a licensee from Lensch and Leder? A. That is right.

Q. Under their invention which was patented in the patent in suit? A. That is right.

Q. And you had full knowledge at that time, did you not, that the application was being filed and prosecuted?

(Testimony of Harry B. Rice.)

A. I understood it was being filed, yes.

Q. In fact you had quite a few conversations in regard to it, didn't you, conversations with Mr. Martin, the patent attorney?

A. I did, yes.

Q. And you knew all about the progress of the application through the Patent Office?

A. I did. [236]

Q. And you knew when it was issued?

A. I did.

Q. You sold guns such as Plaintiffs' Exhibit 5, manufactured under the patent in suit, during the pendency of the application, didn't you, on behalf of the Metal Spray Company, the licensee?

A. I did.

Q. And you sold them after the patent was granted, didn't you?

A. I did.

Q. You knew at the time you sold these guns, after the granting of the patent, that all the guns which went out of the shop were marked with the patent number 2,096,119, did you not?

A. Which patent is that?

Q. That is the patent in suit.

A. I did.

Q. Did you send this letter, Defendants' Exhibit M, folded in an envelope in the usual way?

A. I won't say folded. I will say it might have been in a flat envelope. I sent it in an envelope.

Q. The letter bears creases indicating that it was folded at some time. When did that occur?

A. You mean the folding of the letter?

Q. Yes. When was the letter folded?



(Testimony of Harry B. Rice.)

A. I can't say. [237]

Q. In whose possession has that letter been?

A. Apparently——

Q. Has it been in your possession?

A. During what time?

Q. Well, how long was it in your possession, if ever?

A. This letter hasn't been in my possession since it was mailed originally.

Q. And you don't remember whether it was folded or not when it was mailed?

A. I do not.

Q. Did you personally mail it?

A. I might have.

Q. You are not sure?

A. I am not sure.

Q. Mr. Rice, did I understand you to testify that you copyrighted this Bulletin 500?

A. I did.

Q. In your own name?                      A. Yes, sir.

Q. How did you happen to copyright it in your own name instead of the name under which you were doing business?

A. It is frequently the custom, because the Metal Spray Company was merely a vehicle, my vehicle in distribution. The contract I had with Lensch and Leder was made out to me, gave me the distribution of the gun.

Q. Well, who printed that circular, that Bulletin 500? [238]

(Testimony of Harry B. Rice.)

A. I do not know for certain.

Q. Well, to the best of your recollection, who printed it?

A. I think the New Method Printing Company.

Q. Is that a Los Angeles concern?

A. A Los Angeles concern.

Q. Is it in business today?

A. I think so.

Q. Well, don't you know one way or the other?

A. I am reasonably certain they are in business.

[239]

Q. The New Method Printing Company?

A. Yes, sir, on Spring Street, I think.

Q. On Spring Street?           A. Yes.

Q. Aren't you sure whether or not they printed that bulletin?

A. I am reasonably sure. We are looking back six years.

Q. You are willing to testify that that is the fact?

A. I would not testify positively. I say I am reasonably certain that the New Method Printing Company printed that circular.

Q. Who made the plates for the circular?

A. I am not certain.

Q. To the best of your recollection who made the plates?

A. They were either made by the New Method Printing Company or by a concern—I can't recall the name. I can find them. They are on North Broadway.

(Testimony of Harry B. Rice.)

Q. Some concern on North Broadway?

A. Yes.

Q. That is in Los Angeles? A. It is.

Q. Is that concern in business today?

A. I don't know.

Q. I would like you to reflect a moment, if you will, [240] and say whether or not you can state the name of that concern.

A. If I had—may I make a statement to you? I think I can obtain the name of the concern who made the cuts and the photographs.

Q. But at this moment you don't remember the name? A. I do not.

Q. Now, did you pay for these circulars, pay the printer for making these circulars?

A. Certainly.

Q. Bulletin 500, I am talking about.

A. Certainly.

Q. Do you remember how much you paid?

A. No, sir.

Q. Do you remember how many were run off?

A. I would hazard a guess that either 1,000 or 3,000.

Q. You are not sure which?

A. No—one, two or three thousand.

Q. Who personally placed the order for the printing? A. I did.

Q. Did you personally pay for the printing?

A. Yes, sir.

Q. Did you make payment by check or cash?

(Testimony of Harry B. Rice.)

A. Pardon me. May I correct that? I personally paid for it under the name of the Metal Spray Company. I signed the check. [241]

Q. You mean you gave the printer a check over the signature of the Metal Spray Company by yourself? A. Yes, sir.

Q. What was the amount of that check?

A. That I can't say for certain.

Q. Well, what approximately, as best you can recollect, was the amount?

A. The cost of printing circulars of this type in those days was between \$30 and \$50 per thousand, printing alone.

Q. What is your statement, then, as to the amount which these circulars cost?

A. \$30 to \$50 a thousand.

Q. Can't you fix that amount with more certainty? A. I cannot.

Q. What was the date of the check which you gave in payment of those circulars?

A. I can't say. My records, you know, I don't have them.

Q. Did you have any other work done by the New Method Printing Company after you had this run of circulars, Bulletin 500?

Mr. Litzenberg: We object to that as immaterial.

The Court: It is simply to fix the time.

The Witness: The question?

(Question read by the reporter.) [242]

A. I think so.

(Testimony of Harry B. Rice.)

Q. By Mr. Huebner: How long afterwards?

A. Well, say within the next six months, during the next six months. And I had some prior.

Q. Within six months or subsequent to six months after the run of Bulletin 500?

A. Within six months.

Q. Yes. Was it within six months or subsequent to six months?

A. I would say that I had another circular printed within six months prior to this circular.

Q. Six months prior?

A. A process circular, a circular covering process.

Q. Did you pay for the preceding job?

A. I did.

Q. By cash or check?

A. Undoubtedly by check.

Q. And what was the date of that check?

A. I am not certain.

Q. What was the amount of that check?

A. I can produce some checks, if you wish.

Q. I am asking you, trying to test your recollection and ascertain further particulars of these transactions. If you have checks with you that will establish any of these facts, you may produce them.

A. There was some \$200 spent for circulars in December [243] of 1933, but that was a process circular.

Q. And that didn't have anything to do with Bulletin 500?      A. Nothing whatever.



(Testimony of Harry B. Rice.)

Q. Now, did you pay that \$200 bill prior to placing the order for Bulletin 500?

A. I did.

Q. Did you owe them any money between the time you paid that \$200 bill and the date upon which you owed them for Bulletin 500?

A. Did I pay—I want to get that question again.  
(Question read by the reporter.)

A. I can't say.

Q. You can't say whether there was any balance outstanding which you owed them?

A. I can't say.

Q. Was it your custom to pay cash or obtain credit from that company?

A. Usually cash, and sometimes credit.

Q. How much credit were you allowed?

A. In this specific instance, the New Method Printing?

Q. Yes.

A. His custom was cash, but frequently he carried the bills for 60 or 90 days, 30, 60 or 90 days.

Q. In the case of Bulletin 500 did you pay on a cash basis or obtain credit? [244]

A. That I couldn't say. My records are lost.

Q. What is your best recollection about it? Did you pay cash or did you obtain credit?

A. I think I obtained credit.

Q. About how much?

A. I don't know—between \$30 and \$50 per thousand for the circulars.

(Testimony of Harry B. Rice.)

Q. But how long after the job was done did you pay for it?      A. I do not know.

Q. What is your best recollection?

A. I think within 60 or 90 days. I don't know.

Q. That is the nearest that you can fix it?

A. That is correct.

Q. And you are quite sure you didn't pay cash?

A. I don't think I paid cash.

Q. But you might have?

A. Yes, I might have.

Q. There seems to be, from your answers, some slight doubt as to whether the New Method Printing Company did print the first run of Bulletin 500. Is there any real doubt?

A. Yes, because it was shortly after this period that I changed printers. A printer by the name of Arthur Royal on Fourth Street, on East Fourth Street, he did several——

Q. You had him do some work later? [245]

A. I had several jobs.

Q. Is he still in business?

A. I think he is. I haven't checked that.

Q. Now, has this conversation enabled you in any way to recall the name of the engraver or company which made the plates for Bulletin 500?

A. No. But I have the name of the photographer.

Q. All right. Who was he?

A. Carrol Photo Company.

Q. Is that a Los Angeles concern?

(Testimony of Harry B. Rice.)

A. Yes, that is. He used to be on Pico Boulevard.

Q. Is he still in business?

A. I think so.

Q. In Los Angeles?

A. Yes, sir. I think he made the photographs. I could verify it by checking his records.

Q. Your best recollection is at the moment that the Carrol Photo Company of Los Angeles did make the photographs from which the cuts were reproduced in Bulletin 500?

A. Yes, sir.

Q. Who paid for the photographs?

A. I did.

Q. By cash or check?

A. By check.

Q. How much?

A. I think I have that check. I assume that this is [246] the one. I think that this check covers the circumstance you refer to, for \$29.25. It is dated April 6th. Is that the Carrol Photo?

Q. This is to the Hicks Company.

A. Oh, that is for the mimeographs.

Q. Then that isn't the check you wanted to produce, is it?

A. No. This is the check, for \$26.15.

Q. This check dated June 28, 1934, to Carrol Photo, for \$26.15, signed Metal Spray Company, by H. B. Rice, Manager?

A. Yes.

Q. That is the check which you gave in payment for the photographs from which the cuts in Bulletin 500 were made?

(Testimony of Harry B. Rice.)

A. That is my recollection.

Q. Now coming back again for a moment, does this help you in any way to recollect the name of the engraver who made the plates for Bulletin 500?

A. You might try the Acosta. I think there is such a firm. He made a batch of cuts for me. He is on North Broadway.

Q. Is he still in business?

A. I have no—I don't know. That is a name that I remember. Whether he made this one batch of cuts or not I don't know. [247]

Q. Have you any way, Mr. Rice, of identifying that particular copy of Bulletin 500, Exhibit 15, as the particular copy which you say you sent to Mr. Britton?

A. No, sir. Yes, I have. Well, wait. It is a duplicate of several thousand.

Q. Well, I would like you to state whether you have any way of identifying the particular copy which is in evidence as the copy which you say you sent to Mr. Britton.

A. No, there is no method of doing that. I have no way of identifying it.

Q. But you had, you say, from 1,000 to 3,000 of these struck off? A. Yes, sir.

Q. On what date did you—I am anticipating, and maybe I shouldn't do it. Did you register this Bulletin 500 with the Copyright Office?

A. I did.

(Testimony of Harry B. Rice.)

Q. On what date did you deposit copies of Bulletin 500 in the Copyright Office?

A. You mean the approximate date?

Q. I want the exact date.

A. That would be impossible for me to tell you. I don't have the copyright record.

Q. As near as you can recall, then, upon what date did you deposit copies in the Copyright Office?

A. I would say within 10 days of the printing, which [248] would place it at April 10th or 15th.

Mr. Litzenberg: What year?

A. Of 1934.

Q. By Mr. Huebner: When did you execute the affidavit accompanying the application for registration of this copyright?

A. The same answer. Of the copyright?

Q. Yes. A. The same answer.

Q. What is that?

A. The previous answer.

Q. Well, will you state it, please?

A. This is according to custom that I have used on other circulars, and I have no way of determining whether it was within 10 days of the final printing of the circular or not in this particular case. My custom was, within 10 days of the time that I got the two first circulars off the press, to do that, and on that basis I would estimate that I applied for copyright between April—it might have been as early as April 5th—April 5th and April 15th, 1934.



(Testimony of Harry B. Rice.)

Q. Was it your regular custom to send copies off to the Copyright Office within 10 days after printing?

A. That was my usual custom.

Q. Do you think you did that here?

A. I wouldn't be certain.

Q. Do you think you probably did? [249]

A. It was my usual custom, but there were sometimes exceptions. One gets careless sometimes.

Q. You actually paid for that printing job with a check dated June 28, 1934, didn't you?

A. I may have. You mean the New Method Printing Company?

Q. Yes. You have got that check in your possession today, haven't you?      A. I may have.

Q. Let us see it.

A. I have a check of that type in my possession. Here is a check made out to New Method Printing Company.

Q. This check which you have produced is dated June 28, 1934, payable to the New Method Printing Company, in the sum of \$30, signed Metal Spray Company, by H. B. Rice, Manager. Did you execute and deliver that check to the payee on or about the date which it bears?      A. I assume so.

Q. It bears an endorsement on the back, Fourth and Spring Street Branch, Bank of America, paid June 30, 1934. Is that the date the bank paid it?

A. That is the endorsement on the back of the check.

(Testimony of Harry B. Rice.)

Q. The check was paid on the 30th of June, 1934, wasn't it?

A. According to the endorsement on the back.

Q. And the cancellation stamp? [250]

A. Correct.

Q. What was that in payment of? That was in payment of this job of Bulletin 500, wasn't it?

A. That I don't know. The records are incomplete.

Q. You and Mr. Lensch and Mr. Leder have had some differences, haven't you?

A. On occasion, yes.

Q. Mr. Lensch and Mr. Leder have called you an embezzler, haven't they?

Mr. Litzenberg: We object to that, your Honor.

The Court: Just to show bias, and for that purpose only.

A. I heard one report to that effect.

Q. And they have also called you a thief, haven't they?

A. I didn't hear that.

Q. Didn't they call you that in your own presence?

A. Oh, I don't think so.

Q. They have called you other names that were not complimentary, haven't they?

A. Oh, that is correct, yes, sir, frequently.

Q. Isn't it a fact that you arranged or were a party to the issuance of stock of the Metal Spray Company to Lensch and Leder in settlement of

(Testimony of Harry B. Rice.)

moneys which they claim that you embezzled from them?

A. Oh, no, no, sir, not at that time, no, sir. Moneys which were owed by the corporation, Martin and myself, [251] royalties.

Q. I am not asking you to convict yourself, but I am saying that they accused you of embezzling money, and it was that money which they accused you of embezzling that you satisfied by having stock issued to them; isn't that a fact?

A. Absolutely not. That was a legitimate royalty debt.

Q. I am asking you if it isn't a fact that they accused you, and that it was in relation to that identical transaction that you allowed or caused stock to be issued to them in payment of that?

A. Never at any time did they accuse me of taking money which belonged to them, which was satisfied by a stock issue, no, sir.

Q. The corporation owed them quite a sum of money in unpaid royalties, didn't it?

A. That is true.

Q. During the time that you were an officer of the corporation?

A. That is true.

Q. And in lieu of settlement in cash the corporation issued stock to Lensch and Leder, and it was during the time you were an officer, isn't that true?

A. The corporation didn't issue the stock, or, rather, it was a transfer of stock.

(Testimony of Harry B. Rice.)

Q. You gave up some of your stock? [252]

A. And Mr. Martin too.

Q. You had been running this company, the Metal Spray Company, the fictitious firm, prior to incorporation, hadn't you?      A. Yes, sir.

Q. And then you became the vice-president when the concern was incorporated; is that right?

A. That is right.

Q. And how long did you continue to be a vice-president?

A. Until my resignation in May, 1938.

Q. Your resignation occurred about the same time as this issuance of stock or division of stock, between you and Mr. Martin, with Lensch and Leder, didn't it?

A. No. I think the issue of stock was prior to that by several months.

Q. You expressed dissatisfaction, however, over that arrangement, didn't you?

A. I expressed dissatisfaction with the set-up of the firm at the time.

Q. And you quit the firm?      A. I did.

Q. That is, you quit the corporation?

A. I did.

Q. And went over to work for the defendant corporation, the Metallizing Company of America, didn't you?      A. Some time later, yes. [253]

Q. How much later?

A. A matter of weeks, I imagine.

(Testimony of Harry B. Rice.)

Q. It was only about a week or two weeks at the outside, wasn't it?

A. No. I wasn't active in the Metal Spray Company after April 1st. I was not active in the management or control of the Metal Spray Company. I did not join the Metallizing Company until, I think it was, about June or June 15th of that year.

Q. What year? A. Of 1938, I think.

Q. You have been with them ever since, haven't you? A. I have.

Q. And you are with them today?

A. I am, yes.

Q. You still hold some stock, don't you, in the Metal Spray Company? A. I do.

Q. And you have been trying to sell that stock, haven't you?

A. I would like to dispose of it.

Q. And you have made several efforts to sell it?

A. Only two or three.

Q. But you have made two or three efforts to sell it, to sell the stock, haven't you?

A. I have attempted to dispose of it. [254]

Q. And you have not been able to do so?

A. No, sir.

Q. One of the persons to whom you attempted to sell that stock is Walter Anderson, is it not?

A. Well, I think he solicited me first.

Q. Now, be sure of that.



(Testimony of Harry B. Rice.)

A. I think so. It was a telephone conversation.

Q. Why didn't you sell it to him?

A. He was going to negotiate for the sale of it. I don't think he was going to buy it himself.

Q. And you have approached a man named Ernest B. Berry and asked him to buy it, haven't you?

A. I did.

Q. And he wouldn't buy it, would he?

A. He did not.

Q. Has the Metal Spray Company, of which you are a stockholder, ever paid any dividends?

A. Not to my knowledge. I have had nothing to do with it recently.

Q. You have not received any dividends, have you?

A. No, I have not received any dividends.

Q. At the time that the royalties were accruing in favor of Lensch and Leder for their invention of the patent, you had a drawing account of \$250 a month, didn't you?

A. I think approximately.

Q. And you were running the company, I understand you [255] to say?

A. Not all the time. During 1937 and following up to—well, when the stockholders meeting was, in the spring of 1938—I was, well, yes, I was manager, vice-president and manager. But prior to 1937 there was a more or less dual control by Mr. Martin and myself.

(Testimony of Harry B. Rice.)

Q. During that period there were royalties accruing in favor of Lensch and Leder, which remained unpaid? A. Yes, sir.

Q. And during that period you drew your \$250 a month, didn't you? A. I undoubtedly did.

Q. In addition to your \$250 a month, you drew commissions in preference to paying Lensch and Leder their royalties, didn't you?

A. I drew, under the terms of a contract executed by the corporation, and appearing——

The Court: Haven't you gone far enough——

The Witness: ——in the minutes——

The Court: ——to show feeling or bias?

Mr. Huebner: Very well, your Honor. I appreciate that.

The Witness: Did I finish my answer?

Mr. Huebner: I am not going to pursue that further.

Q. By Mr. Huebner: Did you receive an answer to this letter, Exhibit M? [256]

A. I can't say. All the records are in the hands of the Metal Spray Company. I turned them over to them. I have no records of the correspondence.

Q. Where did you get these letters that you referred to on direct examination, purporting to be sent to people in San Francisco?

A. The only thing I took with me when I left the Metal Spray Company was the file marked "Rice, Personal." I found those in that file a few days ago in my garage, among personal files. There

(Testimony of Harry B. Rice.)

were very few records there, but among them were part of the DeLaval files.

Q. Where did you get the checks which you have produced today?

A. Fortunately I had all of my old canceled checks, dating back that far.

Q. Well, those checks are a part of the Metal Spray Company fictitious firm files, aren't they?

A. They were. I assume they were.

Q. Mr. Rice, is this your signature?

A. I would say so.

Q. You are quite sure of it, aren't you?

A. Yes.

Mr. Huebner: I will show it to counsel. [257]

Q. By Mr. Huebner: You mentioned showing a gun to Mr. George Stoddard. Is he living?

A. I think he is but I believe he is in New York.

Q. Rather than to put a complete letter in evidence, I am going to read a paragraph from a letter and ask you whether you wrote it. This purports to be a letter dated December 23, 1937.

Mr. Litzenberg: It seems to me, if your Honor please, the letter ought to be submitted to the witness for identification.

Mr. Huebner: That is all right.

The Court: He is entitled to examine it.

Mr. Huebner: I was going to show it to him.

The Court: Call his attention to the part you expect to examine him about, unless he wants to read it all to get the context. You have the privi-

(Testimony of Harry B. Rice.)

lege of reading it all if it is necessary to get the context in mind. Otherwise, the paragraph will be sufficient.

A. Is this the paragraph you referred to?

Q. By Mr. Huebner: Yes, sir.

A. Yes; I wrote this letter.

Mr. Huebner: I don't want to put the whole letter in evidence unless defendants' counsel wishes. Therefore, I will read a paragraph into the record as part of a letter dated December 23, 1937, on the letterhead of the Metal Spray Company, Incorporated, signed "Metal Spray Company, [258] Inc., H. B. Rice, Vice President", addressed to Mr. K. D. Falk, 2150 West Windsor Avenue, Ravenswood Station, Chicago, Illinois. This is the quoted paragraph: "I am going to add another piece of confidential news: During October, through Mr. Martin's efforts, we obtained a patent which we believe protects our unique design against infringement to such an extent that we can adjudicate it fully in the courts, if necessary, against two or three of our competitors, particularly one whom I do not need to name to you. Our expansion program would provide for the handling of this matter to our fullest advantage."

Q. Did you write that quoted paragraph to Mr. Falk on or about December 23, 1937, and mail the letter to him on or about that date?

A. In connection with sales information; yes.

(Testimony of Harry B. Rice.)

Q. And what patent were you referring to in that quoted paragraph?

A. I was referring, I assume, to this patent.

Q. The patent in suit? A. Yes.

Mr. Litzenberg: I call attention to the fact that it says "design". Is there anything in that or was there any design patent, unique design, as that paragraph says? A. No.

Q. By Mr. Huebner: That is a salesman's expression, isn't it? [259]

A. Unique design; yes.

Q. And at that date, December 23, 1937, you were a vice president of the Metal Spray Company, Incorporated, were you not? A. Correct.

Mr. Huebner: That is all.

Mr. Litzenberg: That is all. Now, if we might call Mr. Britton, I think in a very few minutes we can finish with him. [260]

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WILLIAM M. BRITTON,

called as a witness on behalf of defendants, being first duly sworn, testified as follows:

The Clerk: What is your name?

A. William M. Britton.

Direct Examination

Q. By Mr. Litzenberg: What is your business, Mr. Britton?

A. I am manufacturing metal spray guns.



(Testimony of William M. Britton.)

Q. In what location? A. In Los Angeles.

Q. How long have you been in the metal spray business?

A. I have been connected with metal spraying since 1933.

Q. And what was your business prior to that?

A. I was engaged in various lines of work, in sales work and in engineering.

Q. You are an engineer?

A. Yes, sir.

Q. I understand that you were also a major in the United States Army in the last war?

A. Yes, sir; I was.

Q. Did you at any time have an agency for a Metalspray gun? A. Yes, sir. [261]

Q. Where was this?

A. I was an agent for the Metalspray gun while I was in Detroit.

Q. While you were in Detroit? A. Yes.

Q. About when was that?

A. That was beginning in the fall of 1933.

Q. And with whom did you do business?

A. With the Metal Spray Company of Los Angeles.

Q. With any particular individual?

A. Mr. H. B. Rice was the sales manager.

Q. He was the sales manager at that time?

A. Yes.

Q. And your correspondence was with him?

A. Yes, sir.

(Testimony of William M. Britton.)

Q. I will hand you a carbon copy of a letter, dated April 5, 1934, which has been introduced in evidence, which is addressed to all distributors and agents, and will ask you to inspect that letter and state whether or not you have ever seen that before.

A. I wouldn't be able to say, sir.

Q. Whether you have ever seen that letter before?  
A. No, sir.

Q. Did you not receive that letter in the mail from Mr. Rice?  
A. I wouldn't know, sir.

[262]

Q. Did you not give that letter to Mr. Boyden?

Mr. Huebner: Just a minute, your Honor. This is counsel's own witness and he is leading him.

Mr. Litzenberg: I beg your pardon.

A. I want to explain that I see nothing on this circular letter to identify it in any way. It is a carbon copy of a circular letter which was sent to all distributors. I have no way of knowing that this particular letter was ever in my hands.

Q. Do you know whether you ever received such a letter or not?

A. Yes; I did receive such a letter.

Q. Did you not give this particular letter to Mr. Boyden?

A. I have no way of knowing because, as I say, there is nothing on this letter to distinguish it from maybe many other letters of the same kind which were sent to other distributors.

(Testimony of William M. Britton.)

Q. By the Court: What did you give Mr. Boyden?

A. I gave Mr. Boyden circular letters similar to this.

Q. How many?

A. One circular letter to Mr. Boyden.

Q. By Mr. Litzenberg: Will you look at the note at the end of that letter in longhand and tell to whom that is addressed?

A. Yes. It says—or that is a distinguishing mark. [263] It says, “Mr. Britton: Under another cover, by airmail, am sending essential pages of the manual. The complete manual is going forward by regular mail”. That does identify it as the circular letter which I received.

Q. Then you would change your statement, would you?      A. I would; yes.

Q. Did you receive the circular attached to it? Will you inspect the circular that is attached to it and state whether or not you received that circular?

A. I received a similar circular from the Metal Spray Company.

Q. Did you give this circular with the letter to Mr. Boyden?

A. I have no means of knowing that.

Q. But you did give him a circular along with the letter?

A. I gave him a circular along with the letter; yes, sir.

(Testimony of William M. Britton.)

Q. Do you have any reason to believe that this was not the circular that you gave to him with the letter?

A. I have no means of knowing that it is not.

Q. It is quite possible it is the circular?

A. Yes.

Q. And that you received that from Mr. Rice along with the letter?

A. From Mr. Rice; yes. I received a number of [264] circulars of this type from Mr. Rice.

Q. Do you know Mr. Rice's handwriting?

A. I wouldn't be able to identify it; no.

Q. Would you say that that is his handwriting at the end of the letter that you have just read?

A. I wouldn't be able to identify his handwriting.

Q. Do you know his signature?

The Court: His signature; his name and initials only.

A. He has signed this circular "H. B. Rice". I don't remember his signature. So that I would not be able to offer any additional evidence other than the letter or the circular itself. I don't remember his signature personally.

Q. By Mr. Litzenberg: Was it customary for you to receive letters from Mr. Rice?

A. Oh, yes.

Q. Which were signed by him in person?

A. Oh, yes.

(Testimony of William M. Britton.)

Q. And yet you say you are not positive this is his signature?

A. That is several years ago and I don't remember his signature. I don't remember how it looked.

Q. But there is no reason for you to doubt that that is his signature, is there?

A. Oh, no; there is no reason for me to doubt it but I don't know it of my own knowledge.

Q. Do you remember about what time such a letter was [265] received by you?

A. It was received in the spring of 1934 as I remember.

Q. Do you remember whether you made any reply or not? Was it customary to reply to letters of this kind?

A. I don't remember whether any reply was made to this or not.

Q. Did you ever receive and sell any of the guns referred to?

A. I received one of the guns; yes, sir.

Q. Do you recall about when that was?

A. That was in the spring of 1934.

Q. One of the guns as shown on this circular?

A. One of the guns as shown on this circular; yes, sir.

Q. Did you sell the gun or did you use it for a sample?

A. No; I didn't sell it. It was turned over to the agent in Detroit who succeeded me.

Q. Who succeeded you?           A. Yes.



(Testimony of William M. Britton.)

Q. And that was in the spring of 1934?

A. I don't remember just when it was turned over to him.

Q. But you received it in the spring of 1934?

A. Yes, sir.

Mr. Litzenberg: That is all. [266]

Cross Examination

Q. By Mr. Huebner: Mr. Britton, you are engaged in business in Los Angeles, selling metal spray guns, are you? A. Yes, sir.

Q. In competition with the Metal Spray Company?

A. And in competition with the Metallizing Company. They are both competitors of mine.

Q. How long have you been engaged in this business here? A. In Detroit?

Q. No; in Los Angeles.

A. I moved here in about the middle of December, 1939.

Q. Do you, by any chance, recall in what kind of an envelope this letter, Exhibit No. 5, was received?

A. No; I have no recollection of that.

Q. Do you remember whether the letter was folded as might be indicated by the creases on the letter? A. I have no recollection of that.

Q. Would you kindly state to the court where the letter has been since you received it?

A. It has been in my files.

Q. Well, did you personally fold the letter?

(Testimony of William M. Britton.)

A. It is probable that I folded the letter and put it in my pocket.

Q. You are not sure, then, whether you folded it or whether it was received in a folded condition?

A. I am not sure on that point. It might have been [267] in my brief case or it might have been in my pocket. I have no definite recollection on that point.

Q. Did you keep the Bulletin 500 and the letter together after you received them?

A. I am not sure whether this circular was kept with it or not. I am not sure as to that.

Q. Are you sure whether or not this circular is the particular copy that you did receive?

A. No. It is one of many circulars which I received from the Metal Spray Company.

Mr. Huebner: That is all.

Mr. Litzenberg: That is all, Mr. Britton.

The Court: It is about adjourning time, gentlemen. How many more witnesses have you?

Mr. Litzenberg: We have only one other witness but I don't think it is necessary to present her. It is the lady who had to do with the publication of that. It is immaterial and has no bearing.

The Court: And how many in rebuttal?

Mr. Huebner: Two, your Honor, I think will be all.

The Court: It will take about how long or can you estimate that?

(Testimony of William M. Britton.)

Mr. Huebner: So far as we are concerned, we should easily finish in the morning or possibly it won't take half a day.

The Court: Very well; 10:00 o'clock in the morning. [268]

Mr. Huebner: Are you through, Mr. Litzenberg? Are you resting?

Mr. Litzenberg: I would like to let that go until morning but I think so. I believe I have not introduced that French gun. I was just looking for it. I think it had better be put in evidence.

The Court: Let the clerk mark it.

The Clerk: Defendants' Exhibit N.

(Whereupon an adjournment was taken until 10:00 o'clock a.m. of Friday, May 3, 1940.) [269]

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Los Angeles, California,  
Friday, May 3, 1940, 10 A. M.

(Parties present as before.)

(Case called.)

The Court: Is that all, Mr. Litzenberg?

Mr. Litzenberg: No, if your Honor please. I want to bring to the court's attention a quotation in regard to the matter of evidence from Corpus Juris, section 1217, on page 973, which reads as follows:

“However, when parts of a document can be understood without the remainder, such parts

(Testimony of William M. Britton.)

may be used without offering the entire document in evidence, although, under such circumstances, the adverse party is entitled to introduce the remainder so far as it is relevant."

Then, that same thing is reflected in our own Code, Section 1854.

"When a part of a writing is given in evidence by one party, the whole on the same subject may be inquired into by the other. When a letter is read, the answer may be given, and when a detached writing is given in evidence, any other writing which is necessary to make it understood may also be given in evidence."

I just wanted to present that matter in support of our effort yesterday to introduce a circular which showed the drawings; and we only wanted it for the purpose of showing the drawings of the French patent. I refer to the Spanish *El Salvador* of February, 1933, which shows the same cuts [270] of the French machine which has been introduced in evidence. And it seemed to me that this document ought to be admitted, with the privilege of furnishing a translation of the circular. If the court would like to see it, there is a translation of the circular, or at least a portion of it. It is a regular publication, a magazine, printed in the Spanish language. The only thing that we claim, of course, is the fact that Mr. Boyden, having received these foreign circulars, saw those pictures in those early years.

(Testimony of William M. Britton.)

The Court: Do you want to do that to rebut any reference which may be drawn that it is not complete and that it is a copy?

Mr. Litzenberg: Yes; and to support his contention that he had the French machine and its disclosures brought to his attention at the time they were working on a new machine, and that his machine, the Mogul machine, is more in accord with the structure of this French machine than it is with the machine that is involved in the suit.

The Court: I see. I will allow nothing but the pictures for the present, for whatever you may argue from it; not the text.

Mr. Litzenberg: That is all that we care for.

The Court: And an exception may show if desired.

Mr. Huebner: If it please your Honor, may I look at it a moment?

The Court: Yes. [271]

Mr. Huebner: I construe the date, your Honor, to be a part of the text.

The Court: Yes.

The Clerk: That will be Defendants' Exhibit O.

Mr. Litzenberg: I would like to call Mr. Hicks for just a little testimony, to finish up a matter that was rather left yesterday uncompleted, which we found could be completed more definitely. [272]



## GEORGE MONTGOMERY HICKS,

called as a witness in behalf of defendants, being first duly sworn, testified as follows:

## Direct Examination

. By Mr. Litzenberg: Please state your full name, your age and residence, Mr. Hicks.

A. George Montgomery Hicks; age 48; 615 South Street, Glendale.

Q. What is your business, Mr. Hicks?

A. Printing and letter service.

Q. How long have you been in that business?

A. About 17 years.

Q. Did you, in April of 1934, do any printing for the Metal Spray Company? A. I did.

Q. Do you recall what you printed for them?

A. Yes. I mimeographed some manuals, manual of instructions.

Q. Have you any evidence with you that would identify what you printed for them at that time?

A. I have the manual here that I printed.

Q. Will you present it? Just state what this is, Mr. Hicks, if you please. Just describe it.

A. Well, it is a manual of instructions which we mimeographed, I think 26 pages, and that is the title of it, [273] and down in the lower left-hand corner it says, "Copyright 1934, H. B. Rice."

Q. Where did this particular copy come from that you hold in your hand?

A. That is the copy that we saved for our own files.

(Testimony of George Montgomery Hicks.)

Q. Now, can you tell when this work was actually done, Mr. Hicks?      A. Yes.

Q. Will you please refresh your memory in any way that you can and tell when this was printed?

A. It was completed and delivered on April 7th.

Q. What year?      A. 1934.

Q. Do you recall what the bill was, that is, the cost?      A. Yes, the price is here, \$29.25.

Q. \$29.25?      A. Yes.

Q. I hand you a check which purports to be made out to the Hicks Company, and I will ask you to examine it and state if you know whether that is the check given to you in payment of that particular bill.

A. Yes, it is, and I recognize it also from the fact that the name, "The Hicks Company", is written in my own writing. I wrote that myself.

Q. The check was given to you and you filled in the——      A. That is right. [274]

Mr. Litzenberg: The date of this check is April 6, 1934, and this check, I think, yesterday was, by mistake, given by Mr. Rice, when he thought he was giving the Carrol Photo check, and afterwards I believe counsel referred to the Hicks check and the invoice, and for that reason we felt that we should present the thing and straighten it out this morning. I would like to offer this manual in evidence and have it marked, as the manual which was printed by the Hicks Printing Company in April of 1934, and which is referred to in the letter

(Testimony of George Montgomery Hicks.)

written by Mr. Rice to dealers, and which was introduced yesterday.

Mr. Huebner: That is objected to as irrelevant and immaterial. There seems to be no real need for encumbering the record with a 26-page document which has no materiality or relevancy to the issue.

Mr. Litzenberg: The manual does have materiality, because it is the manual which was sent out, having to do with the use and operation of the machine which was ready to go forth, and this is the manual referred to in the note written in long-hand by Mr. Rice at the foot of the letter which was sent to Mr. Britton. In other words, these manual sheets are the sheets therein referred to, coming from the man who printed them.

The Court: It may be filed and abstracted later, if necessary, or——

Mr. Litzenberg: It isn't necessary that it should be [275] copied or anything of that kind.

The Clerk: Defendants' Exhibit P.

Q. By Mr. Litzenberg: To what did you refer, Mr. Hicks, in order to get the date of this job?

A. Duplicate invoice.

Q. Duplicate invoice?

A. Which I kept for our files.

Q. And that gives you the date?

A. Yes, sir.

Q. And these came from your own records?

A. That is right.

(Testimony of George Montgomery Hicks.)

Q. And they have been in your possession all this time?      A. Yes, sir.

Q. And it is your property?

A. That is right.

Q. That also appears in your journal?

A. Yes. I have an entry here in the journal, April 7, Metal Spray Company, \$29.25.

Q. And that identifies the job?      A. Yes.

Mr. Litzenberg: You may take the witness.

[276]

#### Cross Examination

Q. By Mr. Huebner: Do you have any independent recollection of when this job was completed, Mr. Hicks?

A. Well, it is pretty hard to remember six years back.

Q. Are you able to tell us of your own knowledge and recollection that the job was completed on the 7th of April, 1934?

A. Yes; I have the record to that effect.

Q. But I want to know whether you recall that, or whether you are merely referring to the record and you find such an entry in the record. Which is it?

A. Well, obviously, in handling hundreds of jobs every year, I wouldn't be able to remember every particular job. I do remember the job. I don't remember exactly whether it was the 7th or the 9th, or just when it was. Naturally I don't after six years.

(Testimony of George Montgomery Hicks.)

Q. And you don't remember either the exact date on which the job was delivered to the customer, do you? A. No, naturally not.

Q. And your records that you have referred to do not indicate the date of delivery, do they?

A. Yes. We bill them on the day we deliver.

Q. But there is no entry, as such, showing delivery date, is there? A. No.

Q. Here is a check dated April 6, 1934, and you say [277] you believe you finished the job about the 7th or the 9th, or thereabouts?

A. No, I don't believe anything. My records indicate that it was finished on the 7th, delivered on the 7th.

Q. Then you required this customer to pay in advance for this work?

A. Not necessarily. He may have made the check out in advance. He may have called up and asked how much the price was to be and made out the check the previous day, and then when I delivered it on the 7th he presented the check.

Mr. Huebner: That is all.

Mr. Litzenberg: I think maybe we had better introduce this check, inasmuch as it has been testified to and identified.

The Court: Yes.

Mr. Litzenberg: I will ask to have it marked.

The Clerk: Defendants' Exhibit Q.

Mr. Huebner: May I ask just one other question, please?



(Testimony of George Montgomery Hicks.)

The Court: Yes.

Q. By Mr. Huebner: What character of work was this, Mr. Hicks, that you—was it mimeographing?

A. Mimeographing, yes.

Q. Did you have a separate stencil for each page of work? A. Yes, naturally. [278]

Q. You didn't run off any copies from a printing press? A. No.

Mr. Huebner: That is all.

Mr. Litzenberg: That is all, Mr. Hicks. I think that is all, if the court please.

The Court: Very well.

Mr. Huebner: Are you resting?

Mr. Litzenberg: Yes. [279]

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### Rebuttal

Mr. Huebner: Mr. Brown, will you please take the stand?

RALPH A. BROWN,

called as a witness in behalf of plaintiffs in rebuttal, being first duly sworn, testified as follows:

The Clerk: Please state your full name.

A. Ralph A. Brown.

### Direct Examination

Q. By Mr. Huebner: What is your residence, Mr. Brown? A. 5522 Kennison.

(Testimony of Ralph A. Brown.)

Q. Los Angeles? A. Los Angeles.

Q. What is your business or occupation?

A. Printer.

Q. Under what name do you do business?

A. New Method Printing Company.

Q. Is that a corporation or is that a fictitious firm name? A. No—fictitious firm name.

Q. Are you the proprietor? A. Yes.

Q. Where is that located?

A. 442 South Spring. [280]

Q. How long have you been located at that address? A. Approximately ten years.

Q. And have you been doing business there all through this period? A. Yes.

Q. For the past ten years? A. Yes.

Q. Have you done any work for the Metal Spray Company? A. Yes.

Q. Do you recall doing any work for the Metal Spray Company during the first six months of 1934?

A. Well, yes.

Q. Directing your attention to Bulletin 500, which is a part of—well, it was Plaintiffs' Exhibit 15 for identification but it was offered in evidence by the defendants. It is Defendants' Exhibit M. Did you print that bulletin? A. Yes.

Q. At whose order? A. Mr. Rice's order.

Q. Did you at that time identify him with any company? A. The Metal Spray Company.

Q. Do you recall the date upon which you completed the first run of that Bulletin 500?

(Testimony of Ralph A. Brown.)

A. Well, I couldn't say the exact date it was completed. I have a record of when it was paid for, but I couldn't [281] give you the exact date it was completed.

Q. What date was it paid for?

A. On the 28th of April.

Q. The 28th of April?

A. Yes. I think it was April. Let me see. I will take a look. I have got the ledger sheet here with me. On the sixth and twenty-eighth. I think that is the first one. In fact I am sure it was.

Q. You mean the sixth month? A. Yes.

Q. That would be June 28th? A. Yes.

Q. What was the amount?

A. The amount was \$30.

Q. I will show you a check made to the New Method Printing Company, dated June 28, 1934, in the amount of \$30. Is that the check which was given you in payment of the account?

A. Yes. [282]

Q. Is that your endorsement on the back of the check? A. Yes.

Q. And the check was paid? A. Yes.

Q. On what date? A. On the 28th.

Q. That is, you received it on the 28th?

A. Yes; I received it on the 28th and it was put through the bank the next day, I think, or possibly the same day. It is usually the same day.

Q. Having refreshed your recollection by reference to the record as to the date of payment, are

(Testimony of Ralph A. Brown.)

you able to state approximately when the job had been completed?

A. Well, we gave Mr. Rice 30 days' time on that when we took the orders. I am not sure whether we gave him 30 days on the first order or not but later on we gave him 30 days. I am under the impression that the first order or two was paid for immediately after the job was finished.

Q. Well, was this one of the first one or two orders?

A. Yes; this was one of the first orders that was given to us.

Q. You have referred in your testimony in correcting the date of payment to June and not April, that is, June 28, 1934, to what record?

A. Well, it is our original entry or it is the first entry we make in our journal. I don't know what you would [283] call it, what kind of a book you would call it, but it is a loose leaf book in which we enter all of our cash received.

Q. Was that entry made in the general course of business?      A. Yes.

Q. Under your direction or supervision?

A. I made it; yes.

Q. Does reference to that enable you to refresh your recollection with respect to the facts that you have testified to?

A. Yes. There is a journal that can be dug up if necessary but this shows it.

(Testimony of Ralph A. Brown.)

Mr. Huebner: I offer in evidence the check, dated June 28, 1934, identified by the witness.

The Court: It may be filed.

The Clerk: Plaintiffs' Exhibit No. 16.

Q. By Mr. Huebner: Would you say that it is true or not true—just a minute. I will strike that out. I have no further questions.

### Cross Examination

Q. By Mr. Litzenberg: Mr. Brown, isn't it true that that loose leaf which you hold in your hand is a loose leaf from cash receipts? A. Yes.

[284]

Q. And that is all that is indicated thereon, so much cash received on that date from the Metal Spray Company? A. Yes.

Q. There is no identification of any job, is there?

A. No.

Q. And that indicates merely the date on which you received that amount of money?

A. That is right.

Q. You do not have in mind, so that you could state definitely, when that job was completed or when it was delivered?

A. Well, I could tell only in this way, that I know what the terms were that I gave him. Six years back you couldn't tell exactly to a day what it was.

Q. That is, assuming from the terms that the job was delivered somewhere near the time of the payment or 30 days before if you gave him credit?



(Testimony of Ralph A. Brown.)

A. Not over 30 days before. I am under the impression that the first time we did business with him that he paid cash for the order right promptly afterwards. The longer we did business the slower the payments came.

Q. May I ask in printing these circulars did you print different batches of the same circular?

A. There was usually a change but almost the same. There were usually some slight changes in them.

Q. But this circular here you identify? [285]

A. Yes; as one of the first we turned out.

Q. As one of the first you turned out?

A. Yes. We have other samples there.

Q. And it is marked "Copyright"?

A. Yes.

Q. You printed that on at the same time?

A. Yes.

Mr. Litzenberg: That is all.

Mr. Huebner: No further questions. Mr. Leder, will you take the stand again? [286]

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PAUL LEDER,

a plaintiff herein, recalled as a witness on behalf of plaintiffs, testified as follows:

Direct Examination

Q. By Mr. Huebner: Mr. Leder, did you hear Mr. Rice testify yesterday? A. I did.

Q. Did you hear him say that he took a gun,

(Testimony of Paul Leder.)

a Metallizing gun, or, rather, a Spraygun, to San Francisco with him in February of 1934?

A. I did.

Q. How many guns, if any, had been completed by you or Mr. Lensch as early as February of 1934?

A. We had only one experimental gun.

Q. How long had you been developing that?

A. I started somewhere around in October of 1933.

Q. Did you have this experimental gun in condition to test or subject to tests during the month of February or was it later?

A. It was an experimental gun and tests had been conducted with it at the time.

Q. I didn't hear you.

A. Tests had been made with it at the time.

Q. In whose custody was that experimental gun?

A. In Lensch's and mine. [287]

Q. Did you ever allow Mr. Rice to take it out of the shop?      A. No.

Q. To your knowledge, was that gun ever gone from the shop?      A. No.

Q. Did you take any precaution to keep it safely there?

A. Well, the only people which had a key to the shop were Lensch and myself. Rice did not have a key to the shop. In other words, he couldn't have taken the gun at all unless by force and I don't think that happened.

Q. Did you keep a close watch on that gun?

(Testimony of Paul Leder.)

A. More or less, I did.

Q. So you would know whether it had been out of the shop during the month of February, 1934?

A. I think I would.

Q. And would you say that you know it was not out of the shop during that month?

A. It was not out of the shop.

Q. Did you have any knowledge of this gun being taken out of the shop by Mr. Rice and shown to anyone in San Francisco in February of 1934?

A. I did not.

Q. Did you at any time consent to Mr. Rice taking the gun out and showing it to anyone in San Francisco as early [288] as February, 1934?

A. I never gave my consent for him to take it out under any conditions.

Q. Are you able to say when the first gun was ready, or the first production gun was ready, for sale? Now I am talking about the guns made under the patent in suit.

Mr. Litzenberg: I think the witness testified on direct examination, giving the date when that gun was finished.

Mr. Huebner: He said that they were ready in May of 1934. I was just reestablishing that and going on from there.

A. May I get that question again?

Q. Yes. When were the first production guns completed and ready for delivery to customers?

(Testimony of Paul Leder.)

A. In the beginning or towards the middle of May.

Q. Of 1934?           A. Of 1934.

Q. I direct your attention to the gun, Plaintiffs' Exhibit 14 for identification. Do you recognize that?

A. It was manufactured by myself and Lensch.

Q. And what designation did you give this gun?

A. Model 125.

Mr. Huebner: I offer in evidence the gun Model 125 which is Exhibit 14 for identification.

Q. Is this gun Model 125, or was it, I should say, manufactured under the Lensch and Leder patent No. 1,987,016, [289] granted January 8, 1935, a copy of which I show you?           A. It was.

Q. On this particular specimen of gun, Mr. Leder, I notice what appears to be a weld on the shoulder of the pipe, which I am indicating. What is that and why is it there?

A. A backfire occurred in the gas passage and it was brazed up again to make the gun in good shape.

Q. Did the backfire blow clear through the shoulder?

A. It melted, or, as the gun passages unite at just about this point here, the hottest point of the backfire was here and the back pressure fused the metal backwards.

Q. And this weld or braze here was to repair the gun?           A. That is right.

(Testimony of Paul Leder.)

Q. Do you happen to know, Mr. Leder, when the first gun made under the patent in suit was delivered to a customer and who it was?

A. The first gun was used by the Shell Oil Company in Long Beach. It was rented to the Shell Oil Company for one month.

Q. And when was the gun delivered to the company if you know?

A. It was shortly after the 17th of May.

Q. In what year?           A. 1934.

Mr. Huebner: That is all. You may cross examine. [290]

#### Cross Examination

Q. By Mr. Litzenberg: Mr. Leder, what was Mr. Rice's relationship to you and Mr. Lensch? What was his connection with your firm?

A. Well, in 1931 or 1932 he applied for a job as a salesman and he started getting job work, metal spray work, for our shop, so that we could use our metalspray guns which we at that time made. And, naturally, they were very crude and so on. We were trying to make a metal spray gun and experimenting and so on.

Q. You and Mr. Lensch were manufacturing, furnishing the machinery and manufacturing the guns?           A. That is right.

Q. And he was sort of a sales manager, getting out and getting business?



(Testimony of Paul Leder.)

A. Salesman; not sales manager. He talked himself into being the sales manager later on.

Q. He became the sales manager later on?

A. Yes.

Q. But his business was to sell the guns?

A. That is right. Well, no. We didn't manufacture them then. By the time he came into our business there, we didn't manufacture any guns for sale. We just did job work with the guns which were made by us. At that time we were not in a position to make guns for sale. We were more or less experimenting with them. [291]

Q. Did he collaborate with you in connection with your experimental work and in developing this new gun?

A. Well, he had apparently a certain amount of experience which he gathered at previous places of work where he was occupied before, like the Metallizing Company or the Metal Layer Company. I think he was connected with the Metal Layer Company of Philadelphia.

Q. You knew that he had experience in acetylene gas devices of various kinds, didn't you?

A. That is what he claimed. I never saw him handle any of the equipment.

Q. Did he ever handle any of your spray guns?

A. Not to my knowledge.

Q. Was he with you at the time the first work was being done on the gun that we are referring to, Model 126, the gun involved in this suit?

(Testimony of Paul Leder.)

A. Well, I believe that after I had just about everything doped out on there that I told him that I was going to make a gun which will run in oil, where the moving parts would run in oil, similar to a differential on an automobile, so that the gun will not need very much attention during operation and wouldn't need much cleaning and so on but just greases pumped into it and the gun can run for hundreds and hundreds of hours without being looked after.

Q. You say when you had things doped out. Did you [292] do most of the development work in connection with this machine?

A. Lensch and I did.

Q. Together? A. Yes.

Q. Did Mr. Rice offer any suggestions at all from his experience, not in the nature of an inventor but as a practical man?

A. After we had the gun going and so on, and as he was the salesman, he could more or less indicate what the trade wanted, in an endeavor to make it applicable to certain features which were to our advantage for sales.

Q. And it was his business to explain this gun to prospective customers and to explain its merits?

A. It was.

Q. And he was familiarizing himself with this construction so as to be able to explain it to customers? A. Yes.

(Testimony of Paul Leder.)

Q. But you and Mr. Lensch did the designing and manufacturing of the gun?

A. That is right.

Q. And so Mr. Rice would, naturally, have to have the gun in order to exhibit it to different customers, prospective customers?

A. That is right.

Q. Do you mean to say definitely that you never at any [293] time gave him this gun to show to any customer?

A. Not before we had the gun tested fairly well.

Q. Of course not. You wouldn't give it to him before it was finished but, after it was finished and ready for demonstration, would you say definitely that you did not give it to him to take out to exhibit to prospective purchasers?

A. No. After it was ready and finished and so on, we consented to let him take it out to customers or prospective customers for demonstration.

Q. And you permitted him to take it out and have it photographed in order to prepare the circulars for advertising?

A. That is right.

Q. And these circulars were made from this particular gun, the first gun that was made?

A. From what we call the experimental gun.

Q. Did you have any other guns in the process of manufacture about the same time that this gun was being completed?

A. The experimental gun was completed first.

(Testimony of Paul Leder.)

After we found out it was worth while going on with the manufacture, we did.

Q. Is it true or is it not true that you had something like 10 guns in the process of manufacture, that is, the various parts for them? [294]

A. No; not 10.

Q. How long after this first gun was completed did you make any other guns?

A. Do you mean started making them or finished? [295]

Q. That you started to manufacture other guns.

A. I would say it would have been about by the end of March or the beginning of April.

Q. Did you discard any models as not being satisfactory, before you finally arrived at the——

A. Yes, I did.

Q. You had to make patterns for making this gun? A. Yes.

Q. Did you use the same patterns for making the guns that you started to manufacture in March?

A. I have made a number of patterns, going through the different phases of development, and the patterns of the gun which was the experimental gun was slightly altered for the purpose of manufacturing the guns for sale.

Q. Just slight changes or modifications?

A. That is right.

Q. In the original patterns? A. Yes.

Q. Will you tell me, Mr. Leder, why you did not enclose these pipes leading from the combustion

(Testimony of Paul Leder.)

chamber to the nozzle, why they were not enclosed in a housing?

A. There was an aluminum sheet metal shield put on the first one, but back pressure of gases, accumulated gases, got in there, and it made it—well, it wasn't dangerous, but it kind of popped by lighting the gun, and we decided to take the shield away and leave it away. [296]

Q. I notice the frame or casting of this gun is cut away in the front so as to expose those feed wheels and the passing of the wire into the nozzle, and also in the rear it is all open. Is there an advantage to be able to use your gun and to see the wire passing through there?

A. Well, it would be an advantage to any gun to be able to see the wire going through there.

Q. And is it an advantage to have that structure a skeleton, showing it left open?

A. Not only that. It is also an advantage in reducing the weight of the tool, because the heavier the gun will be in the hand of an operator the quicker the operator will get tired and have to rest, but taking out every little bit of weight in the gun, it enables the operator to keep on operating a longer period of time.

Q. So that in addition to giving visibility from front and rear of the feed wheels you have a lighter machine?

A. Yes, that is right.

Mr. Litzenberg: I think that is all.

Mr. Huebner: That is all, Mr. Leder. Call. Mr. Stokes. [297]



## CHARLES L. STOKES,

called as a witness on behalf of plaintiffs in rebuttal, being first duly sworn, testified as follows:

## Direct Examination

Q. By Mr. Huebner: Will you please state your full name, Mr. Stokes?

A. Charles Lawrence Stokes.

Q. And your address?

A. 620 San Lorenzo Street, Santa Monica.

Q. Your present occupation or profession?

A. Engineer and patent solicitor.

Mr. Huebner: Mr. Litzenberg, do you wish to save the time of the court and stipulate that Mr. Stokes is a qualified patent expert, or shall I prove it?

Mr. Litzenberg: I think it would be well to ask a few questions, and he can state his qualifications in a short time.

Q. Mr. Huebner: In view of that, will you please outline your qualifications as a patent expert?

A. After receiving an earlier education at the University of California in civil engineering with the class of 1908, of which I am not a graduate, I went into mechanical engineering, and followed that in different lines, principally with the Holt Manufacturing Company at Stockton, California, and was commissioned in the last [298] war as an instructor in caterpillar engineering, as Captain of Ordnance, and later had charge of the Twelfth Division Motor Transport Repair Shops, repairing guns

(Testimony of Charles L. Stokes.)

and other war implements. After the war I was engaged in mechanical engineering in patent matters, with the General Motors Corporation. And at a later date I headed the patent department for Union Oil Company of California, and later again the Associated Oil Company of California. I was admitted to practice as a solicitor before the Patent Office in 1917, which I have followed to date.

Q. Have you previously testified as an expert witness in patent infringement suits?

A. I have.

Q. On how many occasions?

A. On several occasions, in this district and others.

Q. Have you read and are you familiar with the Lensch and Leder patent in suit?      A. Yes.

Q. Have you read and are you familiar with all of the prior art patents which have been offered in evidence by the defendants?      A. Yes.

Q. Have you examined and are you familiar with the construction and operation of the commercial gun manufactured and sold by the Metal Spray Company, Plaintiffs' Exhibit 5? [299]

A. Yes.

Q. Have you examined and are you familiar with the construction and operation of the defendants' Mogul gun, Plaintiffs' Exhibit 8?

A. Yes.

Q. Have you examined and are you familiar with the manufacture and operation of the Metal-

(Testimony of Charles L. Stokes.)

izer gun, Plaintiffs' Exhibit 6, the old Lensch and Leder gun, identified as Model 125, Plaintiffs' Exhibit 14, and the so-called French gun, Defendants' No. N?           A. Yes.

Q. Will you please review to the court the prior art in evidence and point out what features, if any, are novel in the patent in suit over the prior art, and make a comparison of those features which you find to be novel, if any, with the defendants' Mogul gun? That question naturally contemplates a review of the patent in suit, in so far as it may be necessary to establish the disclosure for purposes of comparison.

A. I think for the sake of brevity I might refer to the enlarged drawings of the patent in suit first, and I might explain briefly what I understand the disclosures of the patent to be. The specification discloses a mechanical structure, which includes substantially three parts in operative relationship. They may be identified, if I have the court's permission to mark this drawing in [300] red, first, as a casing, comprising part of power unit 10. This casing carries on one side a gear cover 32a.

Mr. Litzenberg: If the court please, I am just wondering whether it is necessary for all of this detail description, when the patent is in simple language, is easily understood, and the drawings are clear. I do not believe even the court needs any further explanation of the construction exhibited in the patent and on those drawings. I just offer that objection, feeling that maybe——

(Testimony of Charles L. Stokes.)

The Court: I doubt that you need to go into great detail with this witness.

Mr. Huebner: That is not our intention. But in order to complete the record we will offer it. [301]

A. May I state again that the parts comprising the structure of the patent in suit are the casing, comprising the housing for a turbine, from which leads a train of gears to the other side of the casing which supports the transmission wheels for driving the shaft, and each end journaled in the faces of an open channel between the walls of the turbine housing and the gear case housing. These should be referred to as a power unit. There is a combustion unit, which is shown in Figures 7 and 8, comprising a burner head, supporting a nozzle, with passages for gas, such as acetylene and oxygen and air, and having control valves thereon, through a gas manifold, which is adapted to be fastened on the front end, and a power unit to be readily detached therefrom for repair or other purposes. Those are two of the features of the structure in combination. The third feature includes the wire feeding mechanism, which is stated to be placed in the open channel referred to between the faces of the turbine housing and the gear case housing, and comprise a driving knurled wheel similarly journaled in each side of the open channel, and an upper idler wheel, which is fixed onto a hinged latch, so that the upper wheel can be separated

(Testimony of Charles L. Stokes.)

from the lower wheel and prevent the feed of wire therethrough. The combination of these three primary structures, including the parts mentioned, is the cooperative assembly of the patent in suit. The details of the gear train and other [302] minor details are not substantially of great effect, because they can be replaced by equivalent mechanism. By this mechanism the patentees attain certain objects stated in the specification, so that in the first place, by having a detachable combustion unit, in the case of backfire or failure of the passages, as the patentees call it, or for any reason of damage, the combustion unit can be readily removed as a unit, for replacement or repair. The hinged latch construction is another object, in which they state that any desired pressure can be exerted on the wire feeding through the wheels, thereby better preventing slippage of the wire and effecting the uniformity of its feed. The construction of the power unit as such provides an open channel, with all the functions it is capable of performing.

To refer to the prior art in evidence: I will refer first to the Irons patent, U. S. Patent 1,917,523.

Q. Do you have the exhibit number of that, Mr. Stokes?

A. That is Defendants' Exhibit H. This Irons patent referred to is of what I will term hereafter the closed box type, and, with its enclosed feed mechanism, is known as the conventional type. That is stated in the patent, in the second column of page



(Testimony of Charles L. Stokes.)

1, lines 53 to 60. He says that is the conventional type, well known in the trade. To this conventional box type, containing the gears and the wire feed mechanism, there is a detachable gas head or [303] combustion head fixed. The Irons patent contains all its mechanism in the closed box, and is subject to all the defects there may be in this type, and specifically the Irons patent refers to backfiring, as stated on the first page, in the first paragraph, first column. The patent states that, due to the fact that backfiring occurs, that trouble occurs in the passages, and one of his objects is to eliminate by his structure such backfiring. This Irons patent is a closed box for all the mechanism, to which a detachable gas head is fixed which contains a nozzle and feed pipes and a control valve. It does not show in any place a housing for the gears, which is a separate part of the power unit, nor a turbine housing, as a separate part of that unit, having an open channel in which the wire feeding wheels are adapted to rotate. Nor does it show a hinged latch member adapted to be lifted up so that the wire can be fed through there while in operation of the gas.

I will refer next to the Valentine patent, Defendants' Exhibit G, No. 2,102,395. This patent shows a closed box type of wire feeding mechanism, which has a detachable head affixed thereto, with no power unit in the closed box portion. This patent describes the cover of the gears being fixed on

(Testimony of Charles L. Stokes.)

with bolts, and obviously, from the structure itself, the latch portion is not hinged so as to be lifted with the upper idler wheel, which it does not have. [304] and there is no open channel there in which the wire feeding wheels rotate to feed the wire. The drive mechanism is stated to be remote from the gears, going through a flexible conduit marked 2 in Figure 1.

I will refer next to the Schoop patent. Defendants' Exhibit I. No. 1,617,166. This patent is interesting from one standpoint, inasmuch as it is frequently referred to, in certain French patents to be later described, as improvements thereon. This Schoop patent discloses a container 1, in which there is no mechanism whatsoever for feeding wire. The object of this patentee is to provide a chamber filled with granulated material, metal or other material, which is agitated by a blast of combustible gas put into pipe 2, such as hydrogen, and is fed through a combustion unit or gas head into the chamber. This is a detachable combustion unit, fixed into an open chamber, to receive the supply of granulated metal, and that is all the feeding mechanism there is for material. It has no mechanism whatsoever associated therewith which is to be compared in any way with the patent in suit, but it does show a detachable nozzle or burner head.

I will refer next to the Morf patent, Defendants' Exhibit J. No. 1,128,175. A glance at this patent and the drawings thereof fails to disclose any ap-

(Testimony of Charles L. Stokes.)

paratus whatsoever. The patent is apparently an early one, directed to the method of spraying material, and shows no [305] apparatus, so I see no object in discussing it.

I will refer next to the Lensch and Leder patent, Defendants' Exhibit K, No. 1,987,016. This patent is referred to in the patent in suit, which they have made certain improvements over. The patent discloses a gear mechanism and turbine placed on one side of the gun. From the gear case there is a wire feeding wheel extending out, with a single bearing, and an upper wheel is adapted to be fixed on a spring on the cover of the gear case, so that when the gear case is closed the wheels will force the wire through the nozzle, and these wheels are simply placed exteriorly of the gear case, not in any channel at all. The combustion unit on this early Lensch and Leder apparatus is not readily detachable, and there is no adjustment whatsoever in the tensioning device for holding these wire wheels in engagement. [306]

I will refer to British patent No. 440,248, Defendants' Exhibit E, which is of the closed box type, having a gear mechanism entirely enclosed in the box with the wire feeding mechanism. I would say from looking at this patent that it may or may not have a detachable combustion unit. It doesn't say anything about it in the specification but the drawing shows that perhaps the head could be detached. In any event, it is of the form of a closed box type like the Irons patent, for instance. And it

(Testimony of Charles L. Stokes.)

is obvious that in these closed box types any fines or dust from the wire being fed will collect and gum up the gears. That point, I may say, is especially well brought out in the first Lensch and Leder patent, Defendants' Exhibit K. This patent, though, is interesting again from the standpoint of all of these closed box type guns in that he provides also a means of preventing backfire damaging the closed box apparatus. I will quote the words here on page 2, lines 79 to 84. "This results in preventing the flame flashing back through the nozzle to the apparatus proper in consequence of access of air with a small flame or during ignition". And in the same column, line 116, "The dangerous backfiring of the flame to the interior of the pistol is also obviated". This patentee obviates this damage from backfiring, or states he does, by providing very small passages for his air feed.

I will refer to British patent No. 268,431, Defendants' [307] Exhibit F. This patent is also of the closed box type, in which the gears operate in a closed box and do not operate in any open channel with a rotate. The main object of this patentee was to provide a gear box and nozzle head distant from the driving mechanism. And he does not show a turbine associated in any way or the parts in accordance with the teachings of the patent. The patentee has on his gear box a hinged gear cover but it is on the side of the gear case and not associated with any spring-pressed mechanism shown on the



(Testimony of Charles L. Stokes.)

top of the case, which clearly is not hinged to be lifted up and expose the gear wheels.

I will refer to the French patent No. 741,740, which shows a framework supporting a train of gear wheels on the side, which are not housed. And through the main head of that body and not of the burner nozzle at all the air and gas passages pass, which gives it all the defects of the closed type of box, such as has been demonstrated in the Metallizer gun and in all the closed box types heretofore recited. There is an electric motor placed on the rear end of the frame, which the patentee states can be replaced by a distant drive. He does not have a detachable head forming a combustion unit such as is indicated by the patent in suit. The translation which I made with respect to the passages of air and gas states, "Air under pressure comes through a passage 24 set in the very body of the apparatus." And, of course, that is clearly shown in Figure 3 and [308] Figure 5.

Q. By Mr. Huebner: You are able to read and translate French, are you, Mr. Stokes?

A. Yes. I have to use a dictionary occasionally for vocabulary because I don't remember all of the words.

I will refer to French patent No. 680,554, Defendants' Exhibit C. This is the French patent which has been discussed in connection with the physical exhibit known as the French gun, I believe.



(Testimony of Charles L. Stokes.)

Q. Defendants' Exhibit N?

A. Defendants' Exhibit N. This patent, of course, is the closed box type, the disadvantages of which have been exemplified. With respect to the patent in suit, the disclosure of the patent, in the first place, does not indicate any orifice or vent in the top such as is shown in the model. It doesn't show a latch of any kind there. It does not show a channel, therefore, in the sense of the patent because, in any event, the bottom of the drawing in the French patent, as well as the model, of course, is entirely tight so that there is no channel there, for instance, which will permit the dropping down and elimination of dust and fines which would collect on the bottom in any case, whether there was a hole in the top or not. The bottom is still solid. However, this construction, of course, does not eliminate in the slightest the trouble from damage in the passages carrying air and gas to the [309] nozzle. These are placed in the front wall of the French patent and model and it is subject to the deterioration which the patent in suit states he wishes to avoid. It does not have a detachable combustion unit, described by the patentees. That these dangers existed from backfire and so forth in this French patent is very clearly illustrated because they provide not only one but two safety devices, illustrated in Figures 4 and 6, to take care of backfire damage by relieving the pressure. The translation I have made brings that out very clearly.

(Testimony of Charles L. Stokes.)

Figure 4, for instance, shows a passage, marked 27, for oxygen, which is joined to a passage 28 for acetylene, and these mixers go through baffles 29 which the patentee says are for the purpose of thoroughly mixing them. They then go into what he calls a safety chamber 32, which has a diaphragm or a disk which he says is of small strength so that it will be easily ruptured on a predetermined pressure. And from there it goes through the pipe 30 and the control valve shown in Figure 5 up to the passages marked in Figure 1, marked 12 and 13. One of those passages is for the mixture of gases as I have described and the other one is for air. Those passages are shown in Figure 1, as in the model, clearly in the box itself. I might just briefly refer to this in describing the safety device. "One of the objects of this invention is stated in the second paragraph, to diminish the risk of back-fire." He provides [310] a safety chamber disposed in the course of the gases, which carries a weak ruptured wall broken in case of backfire to prevent the burning gases from circulating into the combustible gas passages. The second safety arrangement is in Figure 6, which he states is in the acetylene gas line. And the operation of that is simple inasmuch as, normally, the gas would go up and by its pressure lift the valve or ball 36, let the gas go through and, when the valve is off of its seat, if there is a backfire, the pressure will reseal it and prevent the flame going past that ball. I

(Testimony of Charles L. Stokes.)

think that French patent in particular emphasizes the weaknesses and dangers and troubles evolved from this closed box type of guns because he thought it necessary to provide two safety devices.

I will turn to French patent No. 639,039, Defendants' Exhibit D. Both this patent and the one previously discussed are issued to the same patentees. And it will be noted that both of them refer to improvements in the Schoop type of gun, as illustrated in United States patent No. 1,617,166 that I have discussed. One of them, Defendants' Exhibit C, does not use the Schoop type of detachable combustion head. The type now under discussion, Defendants' Exhibit D, shows a combustible head which is detachable from a closed box type of gun. And, of course, this particular patent, in Figures 1 and 2, shows a reciprocating arrangement there for feeding wire and in Figure 5 shows a [311] turbine. In neither case are there gears or transmission machinery and in neither case are there any open spaces according to the patent in suit. In this patent, likewise, he finds it necessary to provide a safety arrangement for this so-called Schoop type of gun, and he provides a passage which is best seen in Figure 3 and identified by the number 32. The specification in my translation shows that that is what he calls a filter plate which, normally, is set so that the entering gases will be filtered to take out dust and other material, while, on the other hand, if there is a backfire, and I will quote the

(Testimony of Charles L. Stokes.)

patent briefly, he says, "to prevent backfiring into the gas passage, there is fixed on the gas supply tube shown in Figure 3 a filter plate 32 which a spring 33 constantly holds out from opening the orifice of tube 31. When a backfire occurs, the resulting pressure of this quickly applies the filter plate 32 upon the orifice of tube 31 and prevents penetration of the flames into the gas conduit".

I think that that concludes my observations on the prior art.

Q. The question contemplated or included, Mr. Stokes, as you probably recall, a request for a comparison of the features which you observed as new in the disclosure of the patent in suit with such features, if any, as you find in the defendants' Mogul gun.

A. The features of novelty that I have brought out in [312] combination as to the structure of the patent in suit may be observed by showing on the enlarged drawing of the accused gun the casing comprising a member or power unit on the rear, which supports a gear train, shown in the dotted lines of the lower Figure of Plaintiffs' Exhibit 9, corresponding exactly in their structure and mode of operation with the gun in suit, shown in Figure 2 of the patent. This power unit, as is readily seen, supports on each side a turbine housing in each case. On the opposite side of that member it has a gear case or housing and in the front portion is a detachable combustion unit in each case, carrying the

(Testimony of Charles L. Stokes.)

air and gas passages, which may be readily detached from the power unit. It is adapted to fit in each case on a shoulder in the front of that power unit so that wire being fed through there will be fed on a straight line from the rear to the back. And this straight line passes almost centrally through an open channel between the walls of the turbine housing and the gear housing and between wire feeding wheels rotatably fastened therein. These are shown in each case very clearly, the upper of the wire feeding wheels in each case being pivotally mounted on the upper part of the power unit and adjustably held under tension in position during operation so as to hold the upper wire feeding wheel in tension with the wire being driven by the lower wheel. The open channel functions to dissipate any backfire and in each case it extends right [313] through the power unit. I may point out in that connection, by referring to Plaintiffs' Exhibit No. 8, that the handle of this exhibit has a hole right through it. It is not simply a core in the handle. The hole extends right through to cooperate with the channel between the walls of the housings in the power unit and is available to relieve pressure and, secondly, to permit any dust or sprays access to the ground. This same structure is shown in Plaintiffs' Exhibit 8-A, which shows two holes in the bottom, for whatever purpose they may be there. The open channel in the plaintiffs' gun and in the defendants' gun permits the passage of any fines and that eliminates any wear



(Testimony of Charles L. Stokes.)

from fines on the wire feeding wheels. It would seem all of the elements are there in cooperative assembly in the defendants' gun which the patent describes.

Q. In the defendants' Mogul gun, when the upper wire feeding wheel is thrown back on its pivoted mounting, is the wire visible to the operator?

A. Yes.

Q. Does that feature enable the use of rough or irregular or oversized wire as described in Bulletin 500?

A. That permits the wire, if it is bent or out of shape, such as it may be curved in being taken from a roll, to be put into the front guide and centered, that is, visibly centered.

Q. In the defendants' gun, when the upper wire wheel [314] is in operative position, latched down, some point has been made that the wire is not wholly visible. Have you observed in the operation of that gun whether or not the wire is visible for practical purposes?

Mr. Litzenberg: The witness has not stated whether or not he ever saw the operation of the gun.

Mr. Huebner: All right.

Q. Mr. Stokes, have you witnessed the operation of a Mogul gun? A. Yes.

Q. Have you operated one yourself?

A. Yes.

Q. All right. Now, will you answer the question?

(Testimony of Charles L. Stokes.)

A. I have seen the wire feeding through the wheels during operation.

Q. By the Court: Do you have to turn that in order to do it?

A. Yes, your Honor. I had to look on the side or on the top. I could not see it from the back.

Q. By Mr. Huebner: Was it necessary to discontinue the spraying operation in order to obtain that visibility?

A. No; it was not. The spraying was going on during that time.

Q. It was just a case of looking around instead of looking from behind?

A. That is right. [315]

Mr. Huebner: Take the witness.

#### Cross Examination

Q. By Mr. Litzenberg: Mr. Stokes, you do not intend as an engineer to tell this court that you can take the Mogul gun in operation and can see the wire entering the feed wheels and emerging from the feed wheels while the machine is in operation, do you?

A. I have already told the court I could not see the wire entering the feed wheels.

Q. In other words, in the Mogul gun you can not see the wire entering the feed wheels or emerging from the feed wheels while the machine is in operation?

A. Yes; I think I can see it emerging from the feed wheels during operation.

(Testimony of Charles L. Stokes.)

Q. By getting down close to it and making a personal inspection? Can that be done while the machine is in operation?

A. My eyesight is just average. I could see it without any great effort.

Q. You don't mean to infer or to——

A. Excuse me. To finish my answer, may I have that piece of wire?

Q. Of course, I am talking now about the machine being in operation; not in demonstration, without the handle.

A. Yes. [316]

Mr. Huebner: Hold it so the court can see it.

A. I think my answer was fully responsive as to what I could see. I said I had to look on the side or on the top. I can see it without any great effort. I could see it in operation. [317]

Q. You did not mean to infer that this handle opened up or did not close the lower side of this channel, did you?

A. If something has a hole in it of that size, I would say it is not closed.

Q. But I mean, so far as vision is concerned, that hole is not in register with any eyesight point that you can see from the top of the machine?

A. I don't think I said anything about seeing through it.

Q. I am asking you. Is this hole in alignment with your vision line in front of the upper feed wheel, when the machine is in normal closed condition, not open?

(Testimony of Charles L. Stokes.)

A. Yes, I would say it is in alignment, about, with the feed wheel.

Q. Well, I think your eyesight is rather off.

The Court: I don't understand that the witness claims any advantage in the way of sight, but that it furnishes an outlet for dust and——

The Witness: Exactly, fine dust.

Mr. Huebner: Fines.

The Witness: Fines and dust.

Q. By Mr. Litzenberg: Not for giving light through the channel?

A. I never mentioned light.

Mr. Litzenberg: That matter was brought out and attention was called to this large drawing, and that day- [318] light could be seen through here, and that was emphasized, and I would call your Honor's attention to the fact that these drawings are about four times enlarged to the machine, and in this particular view the upper feed wheel is thrown back, and for that reason, on this enlarged view, you do not have the little streak of daylight that you can see through there, but when the machine, in its normal size, is ready for operation, you cannot see daylight through, and it was not intended, of course, that there should be daylight through.

Q. By Mr. Litzenberg: Now, Mr. Stokes, will you refer to the Morf patent, Defendants' Exhibit J, and tell just briefly what that teaches?

A. That teaches the feeding of a material, glass or other substances, in the form of a rod, to be sub-

(Testimony of Charles L. Stokes.)

ject to the action of a flame and a blast of air, so that it can be sprayed in finely divided form on metal.

Q. In other words, as early as February, 1915, Mr. Morf has clearly disclosed that a wire or material, when brought in register with the juncture of a gas blast and an air blast, can be vaporized or sprayed in vapor form onto a surface?

A. Without the use of any apparatus.

Q. Without the use of any apparatus?

A. Yes.

Q. Do you find power driven wire feeding members in [319] the Irons patent, Defendants' Exhibit H? A. In a closed box, yes.

Q. And you find a turbine mechanism for driving that power mechanism? A. Yes.

Q. And you find a yieldingly mounted upper feed wheel? A. Yes.

Q. For yieldingly holding the wire in contact between the two feed wheels?

A. Yes, but not hingedly attached, to be lifted out of the road.

Q. Wouldn't you say, referring to Figure 1, in the upper right-hand corner, that that drawing would illustrate or indicate a pivot? A. Yes.

Q. In view of the fact that in the upper left-hand corner there is a latch overlying the front edge of the cover?

A. Yes, but that is the cover of the box, the cover of the closed box.



(Testimony of Charles L. Stokes.)

Q. And the drawing would indicate that the upper feed wheel is pivotally connected to the under side of the cover, would it not? I am speaking now about the patent, this particular drawing.

A. That is right.

Q. And there is a spring bearing on the upper feed [320] wheel? A. That is right.

Q. So that it is yieldingly mounted and pivotally connected to the under side of the cover?

A. Yes; I would say that is true.

Q. And it has a combustion nozzle, that is indicated as being detachable? A. That is right.

Q. Referring to the Valentine patent, which is Defendants' Exhibit G, do you find power driven feed wheels for feeding the wire? A. Yes.

Q. And would you say that the upper feed wheel is yieldingly suspended to the cover of the box?

A. I would say it is yieldingly guided by the channel of the upper part of the box.

Q. Referring to Figure 2, does it not show two vertical coiled springs supporting the opposite ends of the shaft?

A. Those springs are not supporting it, in my opinion. They simply serve to put more tension on the wheel. I wouldn't say it was supported.

Q. I said suspended. A. Suspended——

Q. In other words, these springs exert a yielding action on the upper feed wheel?

A. That is right. [321]

(Testimony of Charles L. Stokes.)

Q. So that the wire is yieldingly held between the two?       A. Yes.

Q. And there is a worm and gear drive for driving it?       A. Yes.

Q. And there is a combustion nozzle?

A. Yes.

Q. And that combustion nozzle is detachable?

A. Yes.

Q. The worm is driven substantially by flexible shaft, indicated at Figure 2?

A. That is right.

Q. Referring to the Schoop patent, Defendants' Exhibit I, this mechanism is of a different type. The material used is not wire, but what?

A. I have already said, I think, that it is pulverized material of different kinds.

Q. And it is forced up into the passageway leading to the nozzle?

A. I see no mechanism of this patent at all that you refer to. There is no mechanism for doing anything in this patent.

Q. Are there not three gas tanks connected with the combustion nozzle, for furnishing the combustible gases?

A. Yes, but nothing for feeding the wire.

Q. Would you not say that the reference numeral 2 connected with the pipe at the bottom of the reservoir 1 [322] was a means for forcing this pulverized dust up through the passageway leading to the nozzle?

(Testimony of Charles L. Stokes.)

A. It is a means, but not a mechanism.

Q. In other words, this pulverized material is forced by air into a nozzle passageway, where it is subjected to the combustible gases?

A. That is right.

Q. Referring now to the Lensch first patent, Defendants' Exhibit K, this mechanism shows the feeding wheels wholly on the outside, I believe, of the power house? A. That is right.

Q. And the housing has a lid which closes down, and which lid also carries the upper feed wheel for the wire, or does it? A. That is right.

Q. And the drive mechanism is in the box, but the feed wheel is on the outside of the box, and is moved with the lid—when the lid is turned back, the knurled feed wheel 27 goes back with it?

A. That is right, yes.

Q. Referring to the British patent, Defendants' Exhibit F, we have here, I believe you said, a closed housing or box type?

A. That is right.

Q. In which the power mechanism is enclosed in the housing? [323] A. Yes.

Q. And the feed gears are in a housing at the side, through which the wire is fed?

A. No. That is the main head. There is no side chamber there at all. That is the main head.

Q. Would you not say there is a partition between the turbine and the gears which fed the wire?

A. I don't see any turbine there in the head at all.

(Testimony of Charles L. Stokes.)

Q. Do you not see it in the lower part of Figure 1?

A. Yes, but the object of that patent is to put that turbine away from the wire feeding head entirely. If you will look at that drawing you will see a broken line.

Q. But by having a partition between the turbine and the gears which drive it. Referring to French patent 741,740, Defendants' Exhibit B, I will ask you to refer to the drawings and state whether or not this drawing, Figure 1, does not show an open vertical channel or passageway through the body, in which are mounted the upper and lower feed wheels 12 and 14?

A. I think so. I think that would be indicated as a passageway.

Q. And the wire passing through these wheels into the nozzle? A. Yes.

Q. And it shows a combustion nozzle which is detachable? [324]

A. No, not without a pipe, no, it doesn't.

Q. Does it not show a nozzle which is detachable by screw connection?

A. Yes, but that nozzle does not carry any——

Q. I am just asking you whether or not——

A. Yes; they all carry nozzles.

Q. Which are detachable? A. Yes.

Q. This mechanism is driven by an electric motor? A. Yes.

Q. And by worm and gear?

(Testimony of Charles L. Stokes.)

A. That is right.

Q. In a separate chamber from that in which the feed wheels are located?

A. That is right, at the rear of the instrument.

[325]

Q. So that the wire is fed in alignment with the nozzle opening?

A. Yes, I think so.

Q. This Figure 4 would seem to show some baffle plates, or what correspond to baffle plates, in the nozzle, would it not? Would you interpret Figure 4 as showing a perforated plate?

A. I think, if I remember right, that is a distributing disk, adapted to register on one side with the air passages in one groove and with the gas in the other.

Q. And to function in breaking up or more thoroughly mixing the gas products?

A. I don't know that that is stated to be for that purpose at all. The translation says that Figure 5 shows in longitudinal view the assemblage of the distribution disk with the diffusion cones, and that is all that appears, two annular grooves, one for gas and one for air. I don't see any breaking up described there.

Q. Well, if gas products or combustible gases are forced through a plate having a series of perforations, isn't it true, from engineering knowledge, that those gases would be more thoroughly mixed?

A. Yes, if they went through there, they would be mixed a little better.



(Testimony of Charles L. Stokes.)

Q. Referring now to French patent 680,554, I will ask you to refer particularly to Figure 3—and this is the [326] French patent, I believe, that we have the physical exemplar of. Referring to Figure 3, as you look down—this, I believe, is a top plan view, with the cover removed. Is that correct?

A. That is right.

Q. And as you look down into this do you see a housing there for the transmission gears or for the driving gears?

A. Yes.

Q. And on the other side there is a separate housing for the turbine?

A. That is right.

Q. And between these two houses is an open space or channel?

A. There is a space there. It is not open.

Q. It is a channel?

A. It is a space. Let us put it that way.

Q. Well, there is sufficient space for the mounting of the feed wheel?

A. Yes, that is right.

Q. And the cover for the upper feed wheel is pivotally connected to the under side of it?

A. Yes.

Q. And there is a spring indication that the upper feed wheel is yieldingly held in place?

A. No, there is no spring shown in French patent No. [327] 680,554 referred to, nor do I see any in the physical exhibit that is supposed to correspond to the patent.

(Testimony of Charles L. Stokes.)

Q. By referring to the physical exhibit, however, and pressing on the upper wheel, do you not find a resiliency there? A. That is right.

Q. But you can not see the spring?

A. No.

Q. Because it is enclosed in the sleeve?

A. Yes, and it is not adjustable.

Q. But when you refer to the drawing it shows a pivoted lever on which the wheel 24 is mounted?

A. Yes.

Q. And there is an extension above the wheel, a yoke, over the upper feed wheel. Would you call that yoke corresponding with the yoke that is shown on the physical exhibit?

A. Oh, yes, I think that would be a fair representation.

Q. So that the upper feed wheel is pivotally and yieldingly held on the under side of this cover?

A. On the cover of the closed box; that is right.

Q. When you close this box there is no visibility to the wire? A. That is right.

Q. When you are feeding? [328]

A. That is right. And all the dust stays in the box; that is true.

Mr. Litzenberg: Which one is this?

Mr. Huebner: That is the Metallizer. You are referring to Exhibit 7?

Mr. Litzenberg: Yes.

Mr. Huebner: That is the drawing of the Metallizer gun.

(Testimony of Charles L. Stokes.)

Mr. Litzenberg: Does the court want to consider the question of adjournment? This is a pretty good time as far as I personally am concerned, to give me a little breathing spell on this.

The Court: 2:00 o'clock.

Mr. Huebner: May I inquire, your Honor, so that my schedule this afternoon can be worked out, whether there will be much more testimony on your part?

Mr. Litzenberg: No, I think no more testimony on our part.

Mr. Huebner: Well, then, we might even, your Honor, be able to—oh, it may take a half hour, so all right. 2:00 o'clock?

The Court: I am very willing to go on for half an hour, if that would conclude it?

Mr. Litzenberg: I think that would be unsafe.

The Court: Very well.

(Whereupon a recess was taken until 2:00 o'clock p. m. of this day, Friday, May 3, 1940.) [329]

## Afternoon Session

2:00 o'clock

CHARLES L. STOKES

recalled.

Mr. Huebner: Mr. Litzenberg, have you any further questions?

Mr. Litzenberg: Yes.

## Cross Examination

resumed

Q. By Mr. Litzenberg: Mr. Stokes, referring now to the French gun, Defendants' Exhibit N, I believe you would refer to that as a box type of gun? A. That is right.

Q. And referring now to the Mogul, would you call that a box type of gun?

A. No, for the reason that it has the open channel, which does not distinguish the French gun, open to the atmosphere, I mean.

Q. But in the general construction of the body, if you will notice on one side of the wall of the French gun there is a housing for the gears?

A. That is true.

Q. And on the opposite wall there is a housing for the turbine? A. That is true.

Q. And the chamber or space for the feed wheels is between the two housings in the box? [330]

A. That is true.

Q. And the lid carrying the upper feed wheel closes down so as to position the upper feed wheel

(Testimony of Charles L. Stokes.)

over the lower feed wheel?           A. That is right.

Q. Now then, when we refer to the defendants' gun, you will find the housing for the gears on one side?           A. Yes.

Q. And the housing for the turbine on the other side?           A. Yes.

Q. With a space between for the lower feed wheel?           A. Yes.

Q. And when the carrying lever or pivoted member or hinged member is brought over to bring the upper feed wheel into the chamber and into contact with the lower feed wheel, you have here the mechanical equivalent of the lid in the French gun?

The Court: Mechanical, he says. Note the limitation there.

A. I was forced to note that in answering. As far as the mechanical equivalent of having some means of lowering that upper wheel, yes, and I speak solely with respect to that feature. I might qualify that further by saying that in the French gun there is no adjustment for such contacting the wheels. It is simply a contact. There is no means for adjusting for different sized wires or different [331] kinds of wires.

Q. If I should say a pivoted member carrying the upper feed wheel, adapted to be closed upon the body of the device to bring the upper feed wheel into engagement with the lower feed wheel, would that be correct?

Mr. Huebner: In describing what?



(Testimony of Charles L. Stokes.)

Mr. Litzenberg: The Mogul gun, defendants'.

A. As I understand the question, as a single element, I think that might describe that latch on the Mogul gun.

Mr. Litzenberg: Will you read the question, please?

(Question read by the reporter.)

Mr. Litzenberg: Notice the language that I used.

Mr. Huebner: What do you mean by the body of the device?

Mr. Litzenberg: That is evident. It is the whole body, the casting.

A. That pivot is not closed on the body of the device. It is the contact——

Mr. Litzenberg: Will you read the question, again, please? You are an engineer, a mechanical engineer, and if you will listen to the language used, that is all I want you to answer.

(Question read by the reporter.)

A. No, because this member is not closed on the body of the device. It is closed on the wire feed wheel. It is not closed on the body of the device.

[332]

Q. It is closed down to bring the upper feed wheel into contact with the lower feed wheel, is it not?

A. That is right.

Q. And it is a pivoted member?

A. Yes.

Q. And hingedly mounted?

A. Yes, sir.

Q. And it carries the upper feed wheel?

(Testimony of Charles L. Stokes.)

A. That is right.

Q. Is that same language not true of this French gun? Does it not cover a pivoted member?

A. Yes.

Q. Or a hinged member? It carries the upper feed wheel?

A. That is right.

Q. And it would engage it so as to contact with the lower feed wheel when it was closed down?

A. With the wire between them.

Q. And it has means for yieldingly holding it in engagement with the lower feed wheel?

A. That is true, but they are not adjustable.

Q. Now, Mr. Stokes, referring to the French gun, I wish you would state, as I enumerate a number of elements, whether it is true of the French gun. This is a metal spray gun, is it not?

A. I would think so. [333]

Q. It has a power unit carrying a turbine?

A. Yes, it carries a turbine.

Q. It has transmission gears and wire feed wheels?

A. Yes.

Q. Said member including a housing for said turbine and gear?

A. I haven't heard anything about a member before this.

Q. Said member is the body of it.

A. It has a body.

Q. Which you could refer to as a body member.

A. I am trying to answer your definitions as clearly as I can. If you will give me the elements

(Testimony of Charles L. Stokes.)

in a sequence that will coordinate them, I think I can go faster.

Q. All right. Point out the housings for the turbines and the gears.

A. Here is the housing for the turbines, a housing inside the box, and comprising the outer cover for the gears.

Q. Point out the open channel in the walls exteriorly of the housing?

A. I don't see an open channel, in the sense of the patent, in this device.

Q. But is there not an open channel or open space between the housing——

A. There is a space, of course, to accommodate the gears. [334]

Q. And that is correctly referred to as a channel or chamber?

A. I would rather call it a space, in this position.

Q. But there is an open space between the two housings?      A. That is true.

Q. And these feed wheels are adapted to be rotated in the channel or in the space?

A. Coming right specifically to that question, if that space extended the whole way, that would be right in it, or partly in it, yes.

Q. Is there a combustion unit comprising a member adapted to carry combustible gases and compressed air, connected with this machine?

A. There is a nozzle on this machine, which has

(Testimony of Charles L. Stokes.)

a combustion unit, which is not a combustion unit as I understand it; it is not detachable from the closed box.

Q. I am not asking whether it is detachable. But referring to the front of the box to which these tubes are connected, is that not a member adapted to carry combustible gases and compressed air?

A. The front of the box would be a member adapted to carry gases and air, correct.

Q. And having control valves?

A. If you include the pipes, yes, it has control valves.

Q. Is there a nozzle base on this box? [335]

A. There is a forwardly extending base on this box for an air nozzle, yes.

Q. And there is a metal spray and nozzle secured to said base and adapted to receive the gases and compressed air from the combustion unit?

A. Yes, on the forward part of the box.

Q. This claim calls for means including an abutment between the nozzle base and the walls of said member for releasably confining said units in operative association. Do you find such construction there?

A. No, I do not.

Q. What would you refer to as an abutment?

A. Well, an abutment is a shoulder.

Q. Where is the abutment on plaintiffs' gun?

A. There are three screws here, which I can take out, and the abutment is clearly shown on the for-

(Testimony of Charles L. Stokes.)

ward part of the power unit, to which these three screws are attached.

Q. In other words, it is the base of the nozzle structure to which the nozzle which you have just removed is attached?

A. No. I am referring to the shoulder, an abutment on the power unit on the casing of the gun in suit.

Q. But this screw base here is secured to the box or body of the machine?

A. That is right.

Q. And is this screw base here not secured to the body [336] of the box, or the machine?

A. Which place do you refer to?

Q. This screw base.

A. That I don't see from the front at all.

Q. Well, it is an extension out there to receive the nozzle?

A. Purely the nozzle, nothing else, no gas pipes or control valve, or anything of that kind.

Q. No gas pipes running to the nozzle proper?

A. That is right.

Q. The closing language of this claim is, "whereby said wire feeding wheels are visibly disposed in in said channel." A. Yes.

Q. Now then, that is particularly adaptable to plaintiffs' machine? A. Yes.

Q. In other words, referring to this side of the body (indicating), the abutment is a part of that side of the gun? A. That is true.



(Testimony of Charles L. Stokes.)

Q. So that the nozzle base is secured to that body?      A. Yes.

Q. At one side only?      A. That is right.

Q. And the other side is wholly open? [337]

A. That is right.

Q. So that this is exposed and makes for the explanation, "whereby said wire feeding wheels are visibly disposed in said channel"?

A. I don't think it is particularly applicable.

Q. But it is correct, isn't it?

A. It is true in plaintiffs' teaching—

Q. Wait a minute. I will ask you about that.

A. All right.

Q. But it is true that the "whereby" clause there, "whereby said wire feeding wheels are visibly disposed in said channel"—that is correct, you said?

A. Yes, that is true in plaintiffs' device.

Q. And this channel is open at the rear and upper portion of that device? The feed wheels can be clearly seen or they are made visible from the rear?      A. That is right.

Q. Do you mean to say that in the same sense that plaintiffs' machine is constructed to give visibility to the feed wheels, that the Mogul machine is constructed to give the same visibility—as an engineer now, giving the court the benefit of your opinion on that? [338]

A. You are asking my opinion as an engineer.

(Testimony of Charles L. Stokes.)

Q. No. I am asking you to state the fact in regard to a structure which——

A. The claims simply say that the wheels shall be visibly disposed in this channel, and I say that these wheels are visibly disposed in this channel in accordance with the claim.

Q. Referring to the Mogul gun?

A. That is right. The claim doesn't say the wheels must be totally visible or partly visible. It simply says "visible".

Q. I will call your attention to the fact that the claim does not say that the wheels shall be visible. The claim recites a physical structure of such a nature whereby—that "whereby" is the conjunction—"whereby said wire feeding wheels are visibly disposed in said channel." In other words, you have a structure here of such a nature that these wheels, these feeding wheels, are visibly disposed or positioned, put in place. Isn't that correct?

A. My contention——

Q. Isn't that correct—yes or no.

A. My contention is——

Q. Please answer the question yes or no.

The Witness: Read the question, please.

(Question read by the reporter.)

A. That is my contention. [339]

Q. Would it be practical to take plaintiffs' machine and enclose this side from which we see the pipes extending from the nozzle base?

(Testimony of Charles L. Stokes.)

A. Will you please modify that by what you mean by "enclose"?

Q. Would it be practical to close it up as a box?

A. You could do anything you want with it.

Q. Is there any other advantage in opening up that structure to the extent to which it is left open back just in the rear of the nozzle base?

A. Down to where?

Q. Down to the upper end of the handle?

A. I think there must be, because I find that same hole going through the defendants' gun, so I assume you are referring to the Mogul, and I see that same thing all the way from the back of the nozzle down to the base of the handle in the Mogul.

Q. You don't find an open space in the rear of the nozzle base down to the handle, in the Mogul gun, do you?      A. Yes.

Q. Will you please point it out?

A. I had the handle off this morning.

Q. That isn't an open space. I am not talking about that. I am talking about an open space, in the sense in which the plaintiffs' gun is left by construction permanently open. [340]

A. You refer to those spaces holding the tubes?

Q. All of that open space there between the nozzle base and the feed wheel.

A. No. The Mogul gun is closed in an equivalent, similar space to that which you refer to; it is enclosed down to the top of the hollow handle.

(Testimony of Charles L. Stokes.)

Q. Now, in operating plaintiffs' gun, by reason of this construction, "whereby said wire feeding wheels are visibly disposed in said channel," it is possible to see the wire and the feed wheels while you are actually operating the gun, without even pulling it back close to your eyes, isn't that true?

Mr. Blount: Just a minute. I think that is the seventh or eighth time that identical question has been asked from this identical witness.

The Court: Well, he may proceed.

Mr. Blount: And it is repetition.

A. In the plaintiffs' gun you can see the wire entering from the back. You can't see it leaving in the front, unless you look down the front, the same as in the defendants' Mogul gun.

Q. By Mr. Litzenberg: But you can see it from the side?

A. You can see it from the side, the same as you can in the Mogul gun, as I testified.

Q. Do I understand you to say that you can, in the [341] same sense, see the wire being fed in the Mogul gun while it is being held in operative position?

A. I told the court this morning that I couldn't see it enter from the back. Otherwise, yes. I can see it from the side and from the top.

Q. From what side? From where I hold the gun, can you see the wire?

A. You are asking me if I could see it. And I said yes, I could see it from this side.

(Testimony of Charles L. Stokes.)

Q. I am talking about holding the gun out in a position almost at arm's length, the way they hold it when they operate it. That is the purpose of having that thing visible in operation, is it not?

A. I don't know. I would hold the gun any way I wanted to operate it. If you wanted to hold it off at arm's length, you could do it, and if you wanted to hold it close, you could do it.

Mr. Litzenberg: That is all I will ask this witness.

#### Redirect Examination

Q. By Mr. Huebner: Mr. Stokes, from your study of the Lensch and Leder patent in suit, do you find any teaching that the wire, as distinguished from the wire wheels, must be visible from the—strike that out. Do you understand from your study of the Lensch and Leder patent in suit that the wire must be visible from the back [342] of the gun during feeding?

A. There is no teaching, as I have studied this patent, that the wire shall be visible from the rear. The structure provides an open channel in which the wire feeding wheels shall be visible.

Q. Now, while you can see the wire in the defendants' Mogul gun from the top and from the side while the wire is feeding during operation, would it involve much, if any, change to see the wire feeding from the rear of the Mogul gun?

A. I would say as an engineer that this latch could be so constructed and designed that you could



(Testimony of Charles L. Stokes.)

see the wire coming in from the back, with very slight modification.

Mr. Litzenberg: We will concede that. That isn't what we have before us.

Q. By Mr. Huebner: Do you observe, from your study of the Lensch and Leder patent in suit, whether it is a fact or not that the power unit and the combustion unit cooperate in performing the function of feeding wire, melting it and spraying the molten metal?

A. In a metal spray gun, of course they must cooperate. Primarily, we will say, in the feeding of wire, in the first place, this wire, as I testified, must go through in practically a straight line, through the open channel in the power unit, to be set to the wire guide in the nozzle base of the combustion unit and to be melted and sprayed, [343] etc.

Q. Now, are there any instructions in the patent in suit that the wire, while feeding, shall be visible, or does the patent merely tell us that the wire feeding wheels shall preferably be visibly disposed?

A. Only the wheels, that is all.

Q. Do claims 3 and 4 say anything about the wire feeding wheels being visibly disposed in the channel, or is that reference only in claim 2?

A. I will have to check that for one moment.

Q. Here is a copy of the patent.

A. The "whereby" clause as to wire feeding is only in claim 2, that is, wire feeding wheels, I should say.

(Testimony of Charles L. Stokes.)

Q. And do claims 3 and 4 have any reference to the wire feeding wheels being visibly disposed in the channel?

A. Yes. Claim 4 has a pair of wire feeding wheels and means for effecting the visible feed, comprising these channels, etc.

Q. Does claim 3 say anything about the visible feed of the wire or the visibility of the wheels in the channel?

A. No. It says nothing about visibility in that claim at all.

Q. Assuming, Mr. Stokes, the advantage of having visible wire feeding wheels located in an open channel, for purposes which the patent in suit teaches, and which was testified to here, is it your opinion that that structure is [344] found in substance in the Mogul gun?

A. Quite in substance, yes.

Q. Does the Mogul gun embody anything more than a slight impairment of that function, in that you do not have quite as full visibility of the wheels as you do in the patent in suit?

A. The visibility is, of course, only to a certain degree of that of the plaintiffs' patent, but the wire is visible during operation.

Q. And are the wheels visible during operation?

A. Yes.

Q. In the Mogul gun?

A. In the Mogul gun.

(Testimony of Charles L. Stokes.)

Q. What is the difference in structure and function between the cover of the French gun, Defendants' Exhibit N, and the pivoted wheel mounting of the Mogul gun?

A. The difference in function is, the cover of this gun completely encloses a box structure, which holds the wire feeding wheels, with the consequence that any gas or leak of gas back through the passages will accumulate in here, and if backfire occurs, detrimentally; second, there is no means here for the release of dust or fines, which may clog these wire feeding wheels. [345]

Q. Did you mean in your testimony on cross examination to say that the French gun has an open space between the turbine and the gears?

A. No. I said it was a space. It was not an open space or open channel, in the sense of the patent in suit. It is a space, because obviously you must have a space to accommodate these gears. But I also pointed out that these gears are in a space, and that space does not extend the full length of the box, so that while it is in a space, it is not in a space as indicated by the patent in suit, between the inside of these housings. It is the forward part of the turbine housing, yes.

Q. And in referring to the open space between the turbine housing and the gear housing in the patent in suit, to what do you refer?

A. I refer to what is termed in the patent an

(Testimony of Charles L. Stokes.)

open channel, which is not enclosed in a box-like structure, as in this French device.

Q. But it has communication with the atmosphere?

A. Communication with the atmosphere, which will eliminate or dissipate any explosion pressure, and also permit venting of fines and dust.

Q. In your cross examination, where you stated that most of the prior patents had detachable nozzles, did you mean to use the word "nozzle" and "combustion unit" synonymously? [346]

A. I have used the word "nozzle" quite separately to "combustion unit", with these patents, I think with the exception of the Morf patent, and even the Morf patent shows a rudimentary nozzle. That nozzle is simply a part of the combustion unit in the patent in suit, and they are all practically made detachable.

Q. When you say they are made detachable, you are referring to the nozzle?

A. I am referring to the detachment of the nozzle either from the combustion unit, if there is one, or from the box-like structure, if it has no detachable combustion unit.

Q. You have pointed out that in the patent in suit the combustion unit is this part which I am indicating, and which is mounted upon the abutment of the member. Is that correct?

A. That is correct.

(Testimony of Charles L. Stokes.)

Q. Now, taking this French gun as one embodiment of the prior art in which a nozzle, as distinguished from a combustion unit, is mounted upon the rest of the device, do you find in this prior device a combustion unit in the sense of the patent, as a combustion unit being detachable from the rest of the device?

A. If I so indicated, I certainly didn't intend that. The French patent simply has a nozzle, like the plaintiffs' device, which is a part of the combustion unit, which is [347] separable from the power unit; and that is not present in the French device.

Q. In the French device the gas and air passages go up through all of the box, do they not?

A. Of the very box itself, that is true.

Q. And is that forward wall of the box in the French device removable, in any sense of the word, from the housing or casing for the gun?

A. It is part of the housing or casing, and in no way connected with anything else except the side wall.

Q. In that French device, if there should be an explosion or fusion of the metals in that front wall of the box, would it be necessary to reconstruct the machine, or could that front wall be taken out and a new front wall put in?

Mr. Litzenberg: We object to that as conjectural and as not at all pertinent.

The Court: Well, he can answer this question.



(Testimony of Charles L. Stokes.)

A. Inasmuch as this French patent is a die casting, for instance, and the passages filled in due to some explosion or fusing, I think it is correct that the entire die casting would have to be replaced.

Q. Would that be true of the patented gun?

A. No, because the combustion head is designed to be separable for easy replacement.

Q. Would it be correct of the Mogul gun?

A. The same thing applies to the Mogul gun.

[348]

Q. As to the patent in suit?

A. As to the patent in suit.

Mr. Huebner: That is all.

#### Recross Examination

Q. By Mr. Litzenberg: May I ask, Mr. Stokes, when we pick up the plaintiffs' gun and we consider the pipes extending through the handle for carrying the gases up to the nozzle, that, I believe, you consider the combustion unit, the pipes extending up, including the nozzle, complete, with the valve in the lower end of these pipes? That is what you call the combustion unit?

A. Yes, as indicated in the patent.

Q. Would you not say that taking these pipes in the French machine, including the valves and the construction which carries the gases through and into the nozzle, that while it is not in the same form, it is the mechanical equivalent of the structure there? In other words, a construction to receive

(Testimony of Charles L. Stokes.)

explosive gases and convey them in mixed form into the nozzle?

Mr. Huebner: Just a minute. That is a compound question.

The Court: Answer the first question first. The latter is largely explanatory.

Mr. Huebner: He just asked if it is the same mechanical construction, and then he used the word "unit." [349]

Mr. Litzenberg: I used the word "unit" to call the witness' attention to——

A. Mechanically equivalent in this structure it is not, because it is not detachable and has no means of making it detachable. When you come to a device that is adapted to carry these different gases to a nozzle, I say yes, of course it carries them to a nozzle through the wall of the closed box.

Q. You wouldn't say that the detachability of it is what makes it or makes it not the mechanical equivalent?

A. In this structure, yes. I am discussing the patent.

Q. Well, I am discussing the structure. Then you have a mechanical structure made with one part that is detachable, and you have got the same identical structure, let us say, made without being detachable. Now, when it comes to the question of possible mechanical function, is not one the mechanical equivalent of the other?

Mr. Huebner: Just a minute. Again, your Honor,

(Testimony of Charles L. Stokes.)

the question is double-barreled and ambiguous, and he argues with the witness.

The Court: Well, if it is equivalent, how far is it equivalent, as to ultimate result, unless it is functional?

Mr. Litzenberg: I said "functional", that the only difference between the two parts was that one was detachable and the other one was not, and we know it is not [350] invention to make a thing detachable or in two parts, where it has been made in one part.

Mr. Huebner: The witness didn't say that the only difference was the fact that one was detachable and one wasn't.

Mr. Litzenberg: I said it. You didn't give him a chance to answer.

Mr. Huebner: He pointed out that there are structural differences. He says they both deliver the gases for combustion, but he says that one of those structural differences involves the fact that the units are detachable.

Mr. Litzenberg: That is all true. That is all elementary.

Q. By Mr. Litzenberg: How many walls would a channel have to have in order to be a channel, Mr. Stokes?

Mr. Huebner: Which channel are you talking about?

Mr. Litzenberg: Never mind. That is a straight mechanical question.

(Testimony of Charles L. Stokes.)

Mr. Huebner: I object upon the ground that it is irrelevant and immaterial.

The Court: The witness in general stated what he understood by the word "channel."

Mr. Huebner: That is right.

The Court: And I think this is proper.

Mr. Litzenberg: Let him answer the question.

A. I think a channel, properly confined, would have [351] two or more walls. I think a channel might have one wall, in the case of a cylinder. In a straight line or angular lines, it might have two or more walls.

Q. But if it has a closed bottom and an open top and open ends, is it not still a channel?

A. I have given my definition of a channel.

Mr. Litzenberg: That is all.

Mr. Huebner: That is all. Mr. Martin. [352]

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JESSE C. MARTIN, JR.,

called as a witness on behalf of plaintiffs in rebuttal, being first duly sworn, testified as follows:

The Clerk: State your full name, please.

A. Jesse C. Martin.

Direct Examination

Q. By Mr. Huebner: What is your residence address, Mr. Martin?

A. 1325 Miller Drive, Los Angeles.

(Testimony of Jesse C. Martin, Jr.)

Q. Are you connected with the Metal Spray Company?

A. I am president of the Metal Spray Company.

Q. How long have you occupied that position?

A. Since 1935, September.

Q. Are you familiar with the gun of the patent in suit as exemplified in Plaintiffs' Exhibit 5?

A. I am.

Q. Does that have a model number in your shop?

A. Model 126.

Q. Do you have a similar gun in a different size bearing another model number?

A. The smaller gun is Model 81.

Q. Is the smaller one identical in construction with the larger one?      A. Identical.

Q. Are there any other model numbers for identifying [353] guns manufactured and sold under the patent in suit?      A. No other numbers.

Q. Will you state how many guns have been manufactured and sold by the Metal Spray Company under the patent in suit, such as Models 81 and 126, embodied as Plaintiffs' Exhibit 5?

A. About 150 total of both sizes.

Q. Will you state to the court the names of a few of the more prominent customers who have purchased such guns from the Metal Spray Company?

A. Yes. I have a partial list here.

Q. I just want representative names.

A. Johns-Manville Company, Lompoc, Califor-



(Testimony of Jesse C. Martin, Jr.)

nia. Internationál Harvester Company. Sinclair Refining Company. Atlantic Refining Company.

Mr. Litzenberg: What is your purpose, Mr. Huebner, in having these——

Mr. Huebner: I am establishing commercial success.

A. Reading Railroad Company. Aluminum Company of America. Dow Chemical Company. Westinghouse Electric & Manufacturing Company. Detroit Edison Company. British Oxygen Company. Shell Oil Company, Amsterdam, Holland. Southern Counties Gas Company, Los Angeles. Southern California Edison Company, Los Angeles. Eclipse Aviation Corporation. Australian Oxygen Company, Sydney Australia. St. Louis-San Francisco Railroad Company, Springfield, [354] Missouri. Holly Sugar Company, Santa Ana. Ramsey, Ltd., Honolulu. Pacific Coast Engineering Company, Oakland. Hamler Boiler & Tank Company, Chicago. Fiat Motors, Torino, Italy. J. I. Case Company, Chicago.

Q. I think that will be enough.

A. That is a partial list.

Mr. Huebner: You may take the witness.

#### Cross Examination

Q. By Mr. Litzenberg: Mr. Martin, how many of the Model 80—was it 80 or 81?

A. 81, the smaller size.

Q. How many smaller sized guns have you sold?

A. I think probably about 12 or 15. It doesn't sell as extensively as the larger size gun.

(Testimony of Jesse C. Martin, Jr.)

Q. Can you tell offhand how many of the larger guns you have sold?

A. Both together, I would say about 150 guns, the 81 and the 126.

Q. There is no difference in the construction and operation between the smaller gun and the larger gun, excepting as to size?

A. There is only one slight difference in the gearing. The smaller gun has what we term a double gear, and the larger gun has a triple gear, that is, there is a triple gear reduction in the larger tool, and there is a double [355] gear reduction in the smaller one. Outside of that, they are exactly the same.

Mr. Litzenberg: I guess that is all.

Mr. Huebner: That is all. With that, your Honor, the plaintiff rests.

Mr. Litzenberg: Defendant rests.

The Court: What shall we do about the argument?

(Discussion as to argument and briefs omitted from the transcript.)

Mr. Huebner: Why don't we leave it up to the court as to whether the court wishes argument?

Mr. Litzenberg: That is agreeable.

The Court: Very well. 20 and 20 days, briefs to be concurrently filed.

Mr. Huebner: And no reply?

The Court: And no reply. [356]

## DEFENDANTS' EXHIBIT A

Department of Commerce  
United States Patent Office

To all persons to whom these presents shall come,  
Greeting:

This Is to Certify that the annexed is a true copy from the records of this office of the File Wrapper, Contents and all Drawings, in the matter of the Letters Patent of Rudolph Lensch and Paul Leder, Number 2,096,119, Granted October 19, 1937, for Improvement in Metal Spray Guns.

In Testimony Whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this twenty-fifth day of July, in the year of our Lord one thousand nine hundred and thirty-eight and of the Independence of the United States of America the one hundred and sixty-third.

[Seal]

CONWAY P. COE,  
Commissioner of Patents.

Attest:

D. E. WILSON,  
Chief of Division.

NUMBER (Series of 1935)

PATENT NO.

74028

1936

DATE OCT 19 1937

DIV. 46

(EX'R'S BOOK) 34  
7

Name RUDOLPH LENSCH AND PAUL LEDER

State of LOS ANGELES ALHAMBRA  
CALIFORNIA

Invention METAL SPRAY GUN

ORIGINAL

RENEWED

APPLICATION FILED COMPLETE APR 13, 1936

Petition, Specification,  
Oath, First Fee \$30, APR 13, 1936  
3 sheets Drawings,

37

Division of App., No. 19  
PARTS OF APPLICATION FILED

Examined and passed for Issue June 3, 1937  
M. Gaylin Exr. Div. 46

Notice of Allowance JUN 4 - 1937

Final Fee \$30 Sub. 1, 1937

Attorney JESSE C. MARTIN, JR 1325 MILLER DRIVE LOS ANGELES CALIF

Associate Attorney

No. of Claims Allowed 4 Print Claims 2 in O.G. Class 91-122

Title as allowed Metal Spray Gun





J. C. Martin, Jr.  
Consulting Engineer & Patent Counsel  
1325 Miller Drive  
Los Angeles, California

April 8, 1936

Commissioner of Patents  
Washington, D. C.

Sir:

Herewith please find application for Letters Patent of Rudolph Lensch and Paul Leder for improvements in Metal Spray Gun, together with Post Office money order for \$30 to cover the filing fee thereon.

Respectfully,

J. C. MARTIN, JR.

JCMJr:S

encls

## PETITION AND POWER OF ATTORNEY

Honorable Commissioner of Patents:

Your petitioners, Rudolph Lensch, a citizen of the United States, and Paul Leder, a citizen of Germany, both residing in the County of Los Angeles, and State of California, whose Post Office addresses are respectively, No. 365 North Avenue 52, Los Angeles, California, and No. 16 Aurora Terrace, Alhambra, California, pray that Letters Patent may be granted to them for the new and useful

improvements in Metal Spray Gun, set forth in the annexed specification, and they hereby appoint

Jesse C. Martin, Jr.

Registration No. 11,241,

of 1325 Miller Drive, Los Angeles, California, their attorney, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith.

Signed at Los Angeles, in the County of Los Angeles and State of California, this 7th day of April, 1936.

RUDOLPH LENSCH  
PAUL LEDER

### SPECIFICATION

The hereinafter described invention relates to the spraying of molten metal, being characterized by improvements in devices for this purpose, which devices utilize gaseous fuels for melting the metal as fed through them in wire form and fluid pressure for atomizing and depositing the molten metal against a base or part to be metal coated.

Among the objects of this invention is the provision of certain new and novel features and advantages beyond the improvements in Metal Spraying Devices as set out in United States Letters Patent granted to Rudolph Lensch and Paul Leder, January 8, 1935, No. 1,987,016.

One of the objects of the present invention is to provide an improved arrangement of controlling the wire fed through the gun whereby any desired pressure may be exerted on the wire in its passage through the wire feeding wheels, thereby better preventing slippage of the wire and effecting through the uniformity of its feed an improved quality of the molten metal deposition.

Another object of this invention is to provide a hinged latch construction whereby the top wire feeding wheel is releasably confined so that during wire feeding it can be set to engage the wire and after or during wire feeding can be unlatched and lifted on its hinged connection out of the way.

Another object of this invention is to increase the efficiency of the power plant as employed for driving the wire feeding mechanism of the gun through improvements, (1) in the turbine used as the prime mover, and (2) in the gearing of the transmission, the housing of the transmission and the manner of setting the transmission gearing in its bearings.

A further object of this invention is to form the combustion unit of the gun as a separate and distinct entity from the mechanical unit or power plant of the gun and to so provide conduits for carrying the fluid for atomizing the molten metal of the gun as well as the fuel for melting the metal that they will be contained in a single unit, one end of which terminates in a base to which the fuel nozzle of the gun is attached, and the opposite end of which terminates in the valve controlling means for the fluid

pressure and fuel in its passage through the unit—thereby (1) condensing the space which these conduits occupy, eliminating joints subject to leakage and permitting of a construction of relatively light weight, and (2) making a construction for carrying fluid pressure and fuel which can be assembled in the gun as a unit as well as replaced as a unit for expeditious repair.

Another object of this invention is to provide in a metal spray gun a casting as an integral part which will contain the housings for encompassing the gears of the transmission as well as the turbine for driving the transmission gears and to so form the casting that it will have a channel way for the wire feed, free and clear of the interiors of the gear and turbine housings.

Another object of our invention is to provide a new and novel way of handling the turbine exhaust, so that the exhaust will be expanded between the cover of the turbine and the turbine impeller and released through openings in the turbine cover, and after passing through these openings will be baffled to effect its discharge circumferentially, thereby effecting a greater efficiency of the turbine through the improved means of governing its exhaust.

A further object of this invention is to improve the efficiency of the combustion unit of the gun through the provision of a baffling arrangement whereby the fluid pressure for atomizing the molten metal will be better distributed around the molten

metal in its discharge through the air cap at the end of the gun.

In order to more fully understand our invention reference should be made to the accompanying drawings, in which Fig. 1 is a side elevation with portions broken away and certain parts in section to better illustrate the improvements. Fig. 2 is a side elevation of the upper portion only of the structure of our invention, this view showing the side directly opposite the side of the elevation of Fig. 1. Fig. 3 is a sectional plan view taken on line 3—3, Fig. 2. Fig. 4 is a rear end elevation of the upper portion only of our improved structure. Fig. 5 is a broken perspective view of the wire feeding mechanism of our improvements. Fig. 6 also shows in sectional side elevation another view of the improved wire feeding arrangement of our structure taken on line 6—6, Fig. 4. Fig. 7 is a side elevation showing the combustion unit only of our improved gun structure, while Fig. 8 is a rear end view of the upper portion thereof.

Referring to the drawings:—Description will first be made of the power plant of our structure in which numeral 10 denotes the casting which contains the chambers for housing the turbine 11, and the gear train cooperating therewith. Numeral 12 denotes the turbine shaft carrying the worm 13, this shaft being mounted in ball bearings 14 and 15. Ball bearings 14 and 15 are adjustably confined endwise by threaded containers 16 and 17 respectively. Containers 16 and 17 are locked in position



after adjustment by lock nuts 18 and 19 respectively. Numeral 20 denotes a cross shaft substantially at right angles to turbine shaft 12. Shaft 20 carries a worm wheel 21 and a worm 22, and is mounted in bearings 23 and 24 at its opposite ends. The bearings 23 and 24 are aligned so as to bring the worm wheel 21 into meshed engagement with the worm 13 of turbine shaft 12. Shaft 20 is adjustably confined endwise through the threaded engagement of bearing 23 with casting 10 on the one end and through the threaded engagement of bearing 24 on the opposite end as provided in the gear chamber cover 25. Lock nuts 26 and 27 confine the bearings 23 and 24 respectively, in adjusted position. Numeral 28 denotes a shaft substantially at right angles to shaft 20. Shaft 28 carries a worm wheel 29, and is mounted in bearings 30, 31 and 32 so as to bring worm wheel 29 into meshed engagement with the worm 22 of shaft 20. Shaft 28 is adjustably confined endwise through the threaded engagement of bearing 30 as provided in the gear chamber cover 32a. A lock nut 33 confines the bearing 30 in adjusted position. Shaft 28, termed as the wire feed shaft, carries a wire feeding wheel comprising two portions, 34a and 34b. Portion 34a consists of a spur gear, while portion 34b consists of a grooved knurl wheel. Situated immediately over the wire feeding wheel of shaft 28 is another similar wire feeding wheel, comprising portions 35a and 35b. Portion 35a consists of a spur gear adapted to mesh with the spur gear 34a, while portion 35b con-

sists of a knurled wheel adapted to cooperate with the knurled wheel 34b in the feeding of the wire through the gun as hereinafter described. The wire feeding wheels, comprised of the parts 34a—34b and 35a—35b are known as the lower and upper wire feeding wheels, respectively. The meshing of the gear portions of the wire feeding wheels is brought about only during the feeding of wire and through a new and novel arrangement of parts involving a latch device pivotally mounted in bearing plates 36 and 37 secured to lugs 10a and 10b of casting 10. The pivotal mounting is occasioned by a shaft 38 fitting bearings made in the plates 36 and 37. Shaft 38 carries a part 39, having depending portions containing bearings for carrying a shaft 40, upon which is mounted the upper wire feeding wheel 35a—35b. Secured to the top of part 39 by bolt 41 is a latch member 42 having wing portions 42a and 42b extending from its side. The member 42 is adapted to swivel on the bolt 41. Now, secured to the bearing plates 36 and 37, respectively, are two forked members 43 and 44. These forked members have open jaws, the jaws being set so that their open ends are opposed to each other. The jaws of members 43 and 44 are adapted to receive the wing portions 42a and 42b of latch member 42, the cooperating edges of the wings and jaws being beveled so that when the latch member 42 is swiveled in its connection a firm but releasably confined engagement of member 42 will be made in the jaws of members 43 and 44. In this latch construction it will be noted that the de-

pending bearing portions of part 39 carrying the upper wire feeding wheel 35a—35b, are adapted to fit between the faces 10c and 10d of the main casting 10—a channel being formed between said faces of casting 10 to receive the part 39 when the latch member 42 is engaged in the forked jaws of members 43 and 44. At this time the gear portion 35a of the upper wire feeding wheel and the gear portion 34a of the lower wire feeding wheel are brought into meshed engagement for the feeding of wire through the knurled portions 34b and 35b of the respective wire feeding wheels. A spring tension device is provided in the latch member 42 which gives the ability to the latch structure to adjust the pressure applied upon the wire in its feed through the knurled portions 34b and 35b of the lower and upper wire feeding wheels, respectively. This device comprises a spring 45 chambered in latch member 42, the upper end of member 42 being tapped to receive a spring tension adjusting screw 46.

In the drawings, Fig. 1, the latch device is shown in dotted lines swung up in the out of service position, that is, when no wire is being fed through the gun. By our improved structure the operator has a full vision of the wire, from the time of its entrance through the rear wire guide 47 and across the face of the knurled portion 34b of the lower wire feeding wheel into the front wire guide 48, before the latch member 42 is dropped down on its pivotal mounting into the channel way of the main casting 10 and its wings 42a and 42b are locked in wire

feeding position in the jaws of members 43 and 44. The improved wire feeding arrangement of our structure including the latch device and channel between the sides 10c and 10d of main casting 10, for receiving the latch member 42 and upper wire feeding wheel as depended therefrom, is well shown in perspective view Fig. 5, while the sectional illustration of Fig. 6 shows the structure in functioning position during the feeding of wire.

Having described the wire feeding structure of our invention we will proceed with the description of the combustion unit thereof and in this connection reference is made particularly to Fig. 1, Figs. 7 and 8, in which Fig. 1 shows this unit assembled in place in the gun structure, and Fig. 7 shows the combustion unit formed as a separate entity ready for insertion into the gun assembly. Numeral 49 denotes the nozzle base member and numeral 50 the compressed air and fuel manifold member—these members forming the termini of the combustion unit. The compressed air used as the atomizing element for the molten metal and as power for driving the turbine of the power plant is carried by conduit 51, the threaded side outlet thereof, 52, being adapted to carry off a portion of the compressed air to the turbine impellor 11 through the passage 52a in main casting 10. Conduit 53 and conduit 54 carry respectively the oxygen and acetylene used as fuel. Conduit 53 and conduit 54 are united together by a combining chamber 55—out of which a conduit 56 leads these mixed gases. The lower ends of the



conduits 51, 53 and 54 are made up in fluid tight joint engagement to manifold member 50, while the upper ends of the conduits 51 and 56 are similarly made up in joint engagement with nozzle base 49. In this structure a definite distance is maintained between the nozzle base 49 and the manifold 50 and the conduits 51, 53, 54 and 56 may all be removed and replaced in the gun assembly at one time. This makes for an efficiency in a metal spray gun not heretofore possible through the ability to expeditiously replace the combustion unit of the gun in the event of failure of the gaseous passages thereof. Numerals 57, 58 and 59 denote respectively the compressed air, oxygen and acetylene valves used for controlling the gaseous fluids of the combustion unit, the same being made up to manifold 50. Furthermore by our improved unit assembly of the fluid carrying conduits of the gun, a more compact and simplified gun structure is effected.



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In the assembly of the unit in the gun a hollow screw 62, tapped into casting 10, through which compressed air leads into passage 52a, together with the screws 63 passing through the holes 64 in nozzle base member 49 and fitting tapped holes in casting 10, hold the unit in releasably confined position in the gun assembly.

Nozzle base 49 is threaded at 49a and 49b, the thread 49b being adapted to receive a threaded union nut 65 holding the gun nozzle 66 in position. Encompassing nozzle 66 and secured to threaded end 49a of nozzle base 49 is air funnel 67. The smaller end of funnel 67 is adapted to receive the air cap 68 through threaded engagement between these respective parts. Lock nut 69 retains the air cap 68 in adjusted position in its threaded engagement with funnel 67. It will be noted that a baffle plate 70 is carried by the union nut 65. Baffle 70 is provided with a plurality of openings 71 through which the compressed air from the conduit 51 of the combustion unit is checked and deflected around the nozzle 66 and through the funnel 67 and air cap 68 in a highly efficient manner in effecting the atomization of the molten metal.

In the improved turbine structure of our invention numeral 11 denotes the turbine <sup>impeller</sup> ~~impeller~~ as fixed to the turbine shaft 12. Main casting 10 is chambered to receive <sup>impeller</sup> ~~impeller~~ 11, a threaded rim being provided on the <sup>impeller</sup> ~~impeller~~ chamber to receive the threaded turbine cover 74. Turbine <sup>impeller</sup> ~~impeller~~ 11 is provided with a cavity between the inner circumferential edge bounding its buckets 75 and its hub 76 <sup>impeller</sup> ~~impeller~~ this space providing what we choose to term the turbine <sup>impeller</sup> ~~impeller~~ expansion chamber. Now in the turbine casing cover 74 and directly opposite the expansion chamber of <sup>impeller</sup> ~~impeller~~ 11, is a chambered portion carrying a plurality of openings around it as denoted by numeral 77. Openings 77 are preferably of like size and inclined upwardly. Numeral 78 denotes a cup-like baffle secured to turbine cover 74 through the medium of

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lock nut 18 of the ball bearing container 16. Baffle 78 is set so as to provide a circumferentially extending slot 79 between its cupped edge 78a and the face 74a of turbine cover 74, thereby providing a free discharge for the air as exhausted from <sup>impeller</sup> impeller 11 through the openings 77 of turbine casing cover 74.

From the foregoing description it will be clear that the air as exhausted from the buckets 75 of turbine <sup>impeller</sup> impeller 11 is held a relatively long time between the chambered portions of the <sup>impeller</sup> impeller and the turbine cover 74 before its final release to the atmosphere through the slot 79. During this time an expansion of the air is occasioned without creating undue back-pressure. By retaining the air exhausted from the turbine <sup>impeller</sup> impeller in this manner we have found that the initial air introduced through the passage 52a against the buckets of the <sup>impeller</sup> impeller is utilized with high efficiency and that a much less pressure of compressed air is required to drive the turbine <sup>impeller</sup> impeller than heretofore used, for example, in the turbine structure of our invention as covered by Letters Patent No. 1987016....

The compressed air through the passage 52a as used for driving <sup>impeller</sup> impeller 11 is controlled through needle valve 80.

The combustion unit of our structure is housed by the handle of the gun, the same being comprised of parts 81 and 82 removably confined by the screws 83, 84 and 85.

We desire it to be understood that reasonable modifications in the structural improvements of our invention, as shown by the illustrative embodiments herewith, may be made without departing from the spirit thereof and we therefore do not wish to restrict ourselves to the exact showing made, the scope of the invention being governed by the extent of the appended claims.

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4 We claim:

1. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and wire feeding wheels, a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having control valves and a nozzle base, a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit and means for releasably confining said units in operative association.

122 268 2  
1122  
2. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and wire feeding wheels, said member having a passage way exteriorly of the gear housings thereof and the walls of said passage way providing a channel; a shaft extending from the transmission gears having a wire feeding wheel adapted to rotate in said channel, a second wire feeding wheel mounted on a hinge secured to the body of said member and means for holding the said hinged wire feeding wheel in rotatable engagement with said first wire feeding wheel.

1122  
3. In a metal spray gun, a unitary member comprising the power plant thereof, said member having a turbine, transmission gears and wire feeding device, a channel way in said member free and clear of the interiors of its gear chambers, said wire feeding device comprising an upper and lower wheel and each of said wheels having a gear portion and a knurled portion, said lower wheel being adapted to rotate between the walls of said channel and said upper wheel having a pivotal mounting attached to the power plant member, and means for bringing the gear portion of the upper wire feeding wheel

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into meshed engagement with the gear portion of the lower wire feeding wheel during the feeding of wire through the knurled portions of said wheels.

4. In a metal spray gun, a combustion unit comprising a member adapted to carry combustible gases and compressed air, said member having a nozzle base, and the walls of said member having passage ways therethrough for carrying said combustible gases and compressed air; said passageways terminating on one end in said nozzle base and on the other end in connections adapted to receive the combustible gases and compressed air, and valve means carried by said unit for controlling the flow of said gases and compressed air through said passageways; said unit having means for connection to the power plant of a metal spray gun.

*turbine*  
5. In a metal spray gun and the turbine of the power plant thereof, in combination, a turbine impellor having a central cored chamber, said chamber having a bounding edge closely adjacent the inner circumferential edge bounding the bottoms of its buckets, a turbine cover fitted to the rim of the turbine impellor housing, said cover having a central cored chamber opposite the chamber of said impellor, a plurality of openings leading out of the chamber of the turbine cover and a baffle over said openings secured to the turbine cover for directing the discharge of fluid passing through said openings.

6. In a metal spray gun, of the class described, in combination, a nozzle, a nozzle base, a union nut for securing said nozzle to the nozzle base, a baffle carried by said nut

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having a plurality of openings therethrough adapted to direct the flow of compressed air from said nozzle base, an air funnel encompassing said nozzle and <sup>with</sup> ~~be~~ and an air cap secured to the end of said funnel.

*Figure 2*

*Fig 2 4*

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In Testimony Whereof, we have hereunto set our hands at Los Angeles, California, this 7th day of April, 1936.

RUDOLPH LENSCH.

PAUL LEDER.

### OATH

State of California,  
County of Los Angeles—ss.

Rudolph Lensch and Paul Leder, the above named petitioners, being duly sworn, depose and say that they verily believe themselves to be the original, first and sole inventors or discoverers of the new and useful improvements in Metal Spray Gun, described and claimed in the annexed specification; that they do not know and do not believe that the same was ever known or used before their invention or discovery thereof; or patented or described in any printed publication in any country before their invention or discovery thereof, or more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by them or their legal representatives or assigns more than twelve months prior to this application; and that no application for patent on said invention has been filed by them or their representatives or assigns in any country foreign to the United States.

And the said Rudolph Lensch does hereby state that he is a citizen of the United States and a resident of the City and County of Los Angeles, State of California,

And the said Paul Leder does hereby state that he is a citizen of Germany, and a resident of Alhambra, in the County of Los Angeles, State of California.

RUDOLPH LENSCH

PAUL LEDER

Subscribed and sworn to before me this 7th day of April, 1936.

[Seal]

ALBERTINE HIGGINS,

Notary Public in and for the County of Los Angeles, State of California.

My Commission Expires July 24, 1937.





Print of drawing as  
originally filed

FIG. 4.

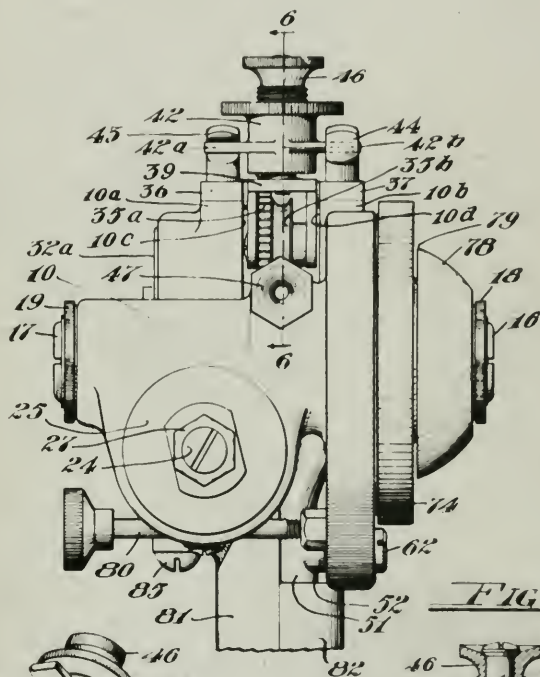
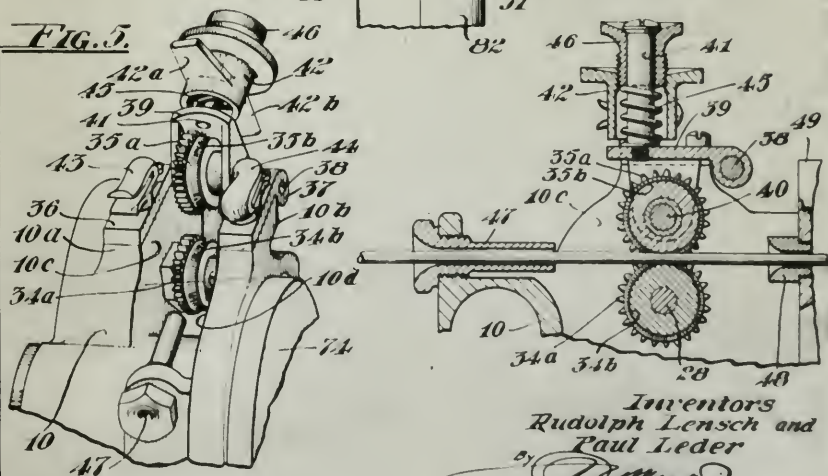


FIG. 6.



Inventors  
Rudolph Lensch and  
Paul Leder

by *J. M. [Signature]*  
ATTORNEY





Patented July 11, 1905.

Fig. 2.

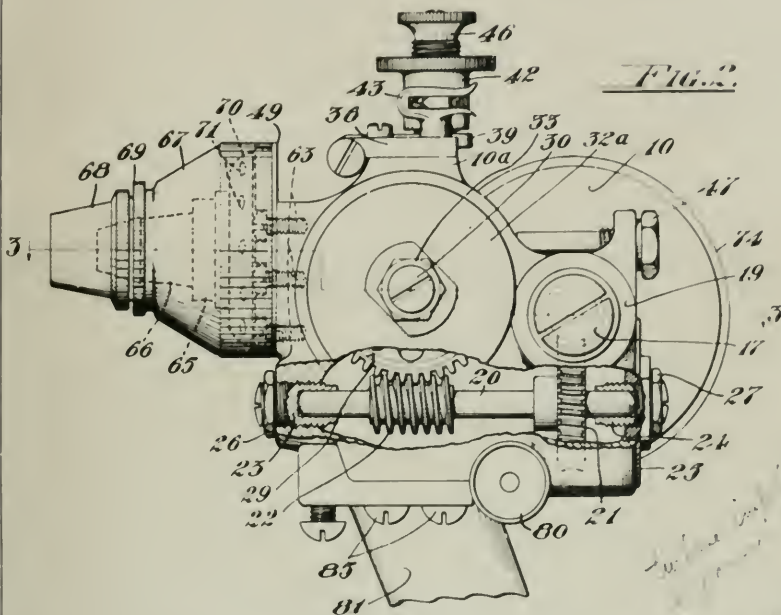
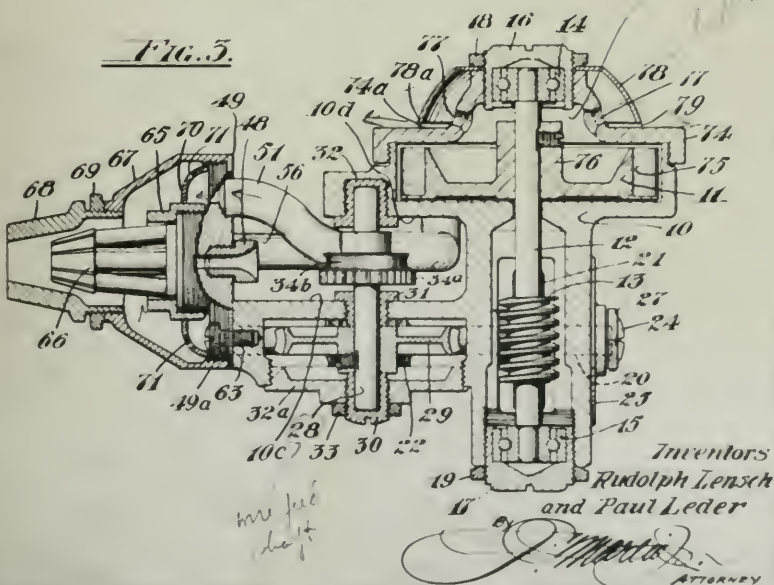


Fig. 3.





Paper No. 3

Department of Commerce  
United States Patent Office  
Washington

Please find below a communication from the Examiner in charge of this application.

CONWAY P. COE,  
Commissioner of Patents.

Jesse C. Martin, Jr.,  
1325 Miller Drive,  
Los Angeles, Calif.

Applicant: R. Lensch et al.

Ser. No. 74,028

Filed Apr. 13, 1936

For Metal Spray Gun

This application has been examined.

The following references are made of record:

Irons 1,917,523 July 11, 1933 91-12.2 UXR

British 268,431 Mar. 31, 1927 M. S. D.

(4 pages; 3 sheets)

A new oath is required. As filed, the oath states that applicants are the "sole" inventors. The new oath must refer to this application by title and serial number.

The Official Draftsman objects to the drawing in that lines are rough and blurred in parts. This defect can be remedied and the drawing will serve in its present form for purposes of examination.

Page 4, line 12, should not "lower and upper" be reversed?

Manifold 50 does not appear on the drawing.

Page 7, "impeller" (five occurrences) spelled incorrectly. Likewise in claim 5 (two occurrences).

Claim 6, "baffle" spelled incorrectly.

Claims 1 and 4 are each rejected as obviously fully met by Irons.

Claims 2 and 3 are each rejected as not presenting invention over the British patent. In the British patent the wire feeding wheels are located in a housing separate from the gear housing. The walls of the feed wheel housing of the British patent form a channel equivalent to that of applicants.

Claim 5 is rejected as drawn to an old combination. Irons shows the combination of a spray gun and a turbine. The specific form of the turbine and impeller does not have any cooperative effect on the combination. Applicants should claim the turbine structure per se.

Claim 6 is allowable, as at present advised.  
W.T.

M. TAYLOR,  
Examiner.

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JAN 21 1937

IN THE UNITED STATES PATENT OFFICE

U. S. Patent Office

270

JAN 22 1937

Division 46

Applicants: Rudolph Lensch and Paul Leder

Serial No. 74,028

Div. 46  
Room 4613

Filed April 13, 1936

For Metal Spray Gun

AMENDMENT

The Commissioner of Patents,

Sir:

Responsive to Official action of July 20, 1936, please amend as follows:

New oath herewith.

Official draughtsman is respectfully asked to make such correction of the drawings as may be required, at the expense of applicant.

Page 4, line 12, the "lower and upper" wire feeding wheels are thought to be properly expressed as written.

Please refer to Fig. 7 of the drawings showing manifold 50, denoted by numeral leading from this member.

Page 7, lines 22, 23, 24, 25, 28 and 29, also page 8, lines 4, 7, 8, 12, 14, 16 and 20, change the word "impellor" to - impeller -.

Cancel claims 1, 2, 3, 4 and 5.

Claim 6, line 6, change "beffle" to - baffle -.

Please add the following claims:

28. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears, and wire feeding wheels, said member including housings for said turbine

34028

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and gears and an open channel in its walls exteriorly of said housings, said wheels being adapted for rotation in said channel, a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having control valves and a nozzle base, a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit, and means including an abutment between the nozzle base and the walls of said member for releasably confining said units in operative association whereby said wire feeding wheels are visibly disposed in said channel.

38. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and a pair of wire feeding wheels, said member providing housings for said turbine and gears and having an open channel in its walls between said housings, one of said wire feeding wheels being mounted on a shaft extending from the transmission gears beyond the housing thereof and adapted to rotate in said channel, the other of said wire feeding wheels being pivotally mounted on said member and adapted for rotation in said channel, and means for holding the said wire feeding wheels in cooperative engagement during the feeding of wire.

49. A wire feeding mechanism for a metal spray gun comprising a member having a turbine, transmission gears, and a pair of wire feeding wheels, means for effecting the visible feed of wire through said wheels comprising: an open channel in the walls of said member between the turbine and gear housings thereof, a wire feeding wheel mounted between the sides of said channel and actuated by said transmission gears, a wire feeding wheel hingedly mounted on said member and adapted for rotation in said channel, and a spring latch for holding said hingedly mounted wire feeding wheel in engagement with said first wire feeding wheel during the feeding of wire.



## REMARKS

Relative to Irons, 1,917,523: It is desired to note that Irons does not provide for the visible feed of the wire through the gun. He does not contemplate a wire feeding mechanism other than the "conventional" construction which includes the wire feeding mechanism and feed wheels in the same housing without the ability to see the wire except by shutting off the tool and opening the cover of the mechanism housing, such, for example, as the Schoop type of wire feeding mechanism as contained in a square box housing. While Irons does provide separated power and combustion units, joining them together for operation, his structure does not teach applicant that with the conventional square box gear and feed wheel housing a channel can be formed exteriorly of the walls of the mechanism housing by the abutment of the nozzle base and the gear housing for the reception of the wire feeding wheels and so that the feed wheels will be open to view and the wire passing there through can be observed in its feeding. This utility in a metal spray gun is of great importance to a gun operator, particularly when inequalities in the metal sprayed deposits, due to irregularity of wire feed, require wire adjustments to be made while the gun is operating. Furthermore, the balling up of the wire, particularly with the softer metals such as lead, tin and zinc, requires expensive shut-downs and results in low output of the tool.



Relative to British 268,431: What is said of Irons relative to visible wire feeding is equally true of the British structure, even though the wire feeding wheels are situated in a separate housing from the turbine and gear mechanism, because it is still necessary in this device to lift the cover of the wire feed wheel housing on the hinge 13 in order to see what is going on with the wire feed; in fact, the structure does not provide visible wire feed, even though it is one step advanced from Irons or Schoop in preventing contamination of the gears and bearings of the feeding mechanism from the particles or fines of the wire. Furthermore, the British structure does not have a separate power unit and combustion unit as complete entities. The gaseous passages are contained in the walls of the mechanism housings as distinguished from being contained fully within the combustion unit. In case of back fire the fuel gases would enter the wire feed wheel case around the fit between the wire and the wire bore of the nozzle, with destructive results; whereas, in applicants' structure, leakage of the fuel gases between the fit of the wire and nozzle will, in case of back fire, pass to waste to the atmosphere without detrimental effect.

Relative to Lensch and Leder Patent No. 1,987,016: It is desired to make this patent of record in this issue, as it has a direct bearing upon the removal of the wire feeding wheels of a metal spray gun from the gear box and mechanism contained therein, whereby visible feed of the wire is occa-

sioned and the destruction of the gears and parts of the feeding mechanism from particles of the wire cut off by the knurled feed wheels is done away with. It is thought that this structure is the first to carry out these new utilities in a metal spray gun, and it is desired to make note of the fact that the present Lensch and Leder structure covers improvements of their former patent learned through the experience of service with their first metal spraying device, incorporating advantages not possessed by their original structure, even though the principles of the present invention are subordinate to same.

It may be stated that the lack of balance of the structure of patent 1,987,016 in the hands of the operator was one contributing factor to the present improvement. The principal weight of the tool, by reason of the mechanism housing being substantially all on one side of the gun handle, created a fatigue in the operator's hand to the detriment of the extended use of the tool, and to the extent that after the manufacture and sale of a number of these guns it was deemed necessary to devise ways and means to rectify this objection. The result of this was the development of the present invention, whereby the turbine and gear housings are substantially balanced on either side of the handle of the gun by virtue of the provision of the wire feed wheel channel as provided in the improvements.

The new claims herewith presented are thought to fully differentiate applicants' structure over the

references cited as well as over their original structure, and favorable consideration and allowance of same is courteously asked.

Respectfully submitted,

JESSE C. MARTIN, JR.,  
Attorney.

January 18, 1937

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Paper No. 5

J. C. Martin, Jr.  
Consulting Engineer & Patent Counsel  
1325 Miller Drive  
Los Angeles, California

January 20, 1937

Commissioner of Patents,  
Washington, D. C.  
Sir:

Relative to application of Rudolph Lensch and Paul Leder, Serial No. 74,028, filed April 13th, 1936, for Metal Spray Gun, Division 46, Room 4613.

Please find herewith Oath referred to in amendment of January 18th, 1937, in response to Official Letter of July 20th, 1936, the same having been inadvertently overlooked.

It is asked that this Oath be filed with the said amendment of January 18th as called for therein.

Respectfully,

J. C. MARTIN, JR.

JCMJr-B

## OATH

State of California,  
County of Los Angeles—ss.

Rudolph Lensch and Paul Leder, whose application for Letters Patent for an improvement in Metal Spray Gun, Serial No. 74,028, was filed in the United States Patent Office on April 13, 1936, being duly sworn, depose and say that they verily believe themselves to be the original, first and joint inventors or discoverers of the new and useful improvements in Metal Spray Gun, described and claimed in the annexed specification; that they do not know and do not believe that the same was ever known or used before their invention or discovery thereof; or patented or described in any printed publication in any country before their invention or discovery thereof, or more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by them or their legal representatives or assigns more than twelve months prior to this application; and that no application for patent on said invention has been filed by them or their representatives or assigns in any country foreign to the United States.

And the said Rudolph Lensch does hereby state that he is a citizen of the United States and a resident of the City and County of Los Angeles, State of California,

And the said Paul Leder does hereby state that he is a citizen of Germany, and a resident of Alhambra, in the County of Los Angeles, State of California.

RUDOLPH LENSCH  
PAUL LEDER

Subscribed and sworn to before me this 18 day of January, 1937.

BERTHA B. JOSEPH,  
Notary Public in and for the County of Los Angeles, State of California.

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Paper No. 6

Department of Commerce  
United States Patent Office  
Washington

Please find below a communication from the Examiner in charge of this application.

CONWAY P. COE,  
Commissioner of Patents.

Jesse C. Martin, Jr.,  
1325 Miller Drive,  
Los Angeles, Calif.

Applicant: R. Lensch et al.  
Ser. No. 74,028  
Filed Apr. 13, 1936  
For Metal Spray Gun

Responsive to amendment filed Jan. 21, 1937.

The drawings in this application are objected to by the Official Draftsman, as stated in the first office



action, in that the lines are rough and blurred in parts. The cost to remedy this defect in the drawings is six dollars. Since this application is otherwise in condition for allowance, this formal matter must be attended to before the case can go to issue. A prompt reply is requested.

H.S.

M. TAYLOR,  
Examiner.

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Paper No. 7

In the United States Patent Office

Div. 46

Room 4613

Applicants: Rudolph Lensch and Paul Leder

Serial No. 74,028

Filed April 13, 1936

For Metal Spray Gun

AMENDMENT

The Commissioner of Patents,

Sir:

Responsive to Official action of March 29th, 1937.

Please find herewith Post Office money order for six dollars to cover cost of remedying defects in drawings as pointed out by the Official Draftsman.

With the corrections made in the drawings, it is respectfully asked that the case be passed to early allowance.

Respectfully,

JESSE C. MARTIN, JR.,

Attorney.

April 13, 1937

Department of Commerce  
United States Patent Office  
Washington

Please find below a communication from the Examiner in charge of this application.

CONWAY P. COE,  
Commissioner of Patents.

Jesse C. Martin, Jr.,  
1325 Miller Drive,  
Los Angeles, Calif.

Applicant R. Lensch et al.  
Ser. No. 74,028  
Filed Apr. 13, 1936  
For Metal Spray Gun

In accordance with the provisions of Order No. 2308, dated March 12, 1917, which reads in part as follows:

\* \* \* \* \*

Obvious informalities in the application may be corrected by the examiner, but said correction must be in the form of an amendment, approved by the Principal Examiner in writing, placed in the file, and made a part of the record. The changes specified in the amendment will be entered by the clerk in the regular way.

\* \* \* \* \*

the changes, hereinafter specified, are made by the examiner in the application above identified.

Should these changes not be satisfactory to the applicant, appropriate amendment may be proposed under the provisions of Rule 78, provided the specification has not been printed.

The application has been amended as follows:

In Fig. 1 of the drawings, the reference numeral of the top wire feed gear has been changed to 35a and that of the lower gear changed to 34a to conform with the specification and the other figures of the drawings.

H.S.

M. TAYLOR,  
Examiner.

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Serial No. 74,028

Department of Commerce  
United States Patent Office  
Washington

June Four, 1937

Rudolph Lensch and Paul Leder,

Your Application for a patent for an Improvement in Metal Spray Gun filed Apr. 13, 1936 has been examined and Allowed with 4 claims.

The final fee, Thirty Dollars, With \$1 Additional for Each Claim Allowed in Excess of 20, must be paid not later than Six Months from the date of this present notice of allowance. If the final fee be

not paid within that period, the patent will be withheld, but the application may be renewed within one year after the date of the original notice with a renewal fee of \$30 and \$1 additional for each claim in excess of 20.

The office delivers patents upon the day of their date, on which date their term begins to run. The preparation of the patent for final signing and sealing will require about four weeks, and such work will not be begun until after payment of the necessary final fee.

When the final fee is paid, there should also be sent, Distinctly and Plainly Written, the name of the Inventor, Title of the Invention, and Serial Number as Above Given, Date of Allowance (which is the date of this circular), Date of Filing, and, if assigned, the Names of the Assignees.

If it is desired to have the patent issue to an Assignee or Assignees, an assignment containing a Request to that effect, together with the Fee for recording the same, must be filed in this office on or before the date of payment of the final fee.

After issue of the patent, uncertified copies of the drawings and specifications may be purchased at the price of Ten Cents Each. The money should accompany the order. Postage stamps will not be received.

The final fee will Not be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Notice.—When the Number of Claims Allowed Is in Excess of 20, No Sum Less Than \$30 Plus \$1 Additional for Each Claim in Excess of Twenty Can Be Accepted as the Final Fee.

Respectfully,

CONWAY P. COE,  
Commissioner of Patents.

Jesse C. Marin, Jr.,  
1325 Miller Drive,  
Los Angeles, Calif.

In Remitting the Final Fee Give the Serial Number at the Head of This Notice.

Uncertified Checks Will Not Be Accepted.

---

J. C. Martin, Jr.  
Consulting Engineer & Patent Counsel  
1325 Miller Drive  
Los Angeles, California

September 13, 1937

Commissioner of Patents,  
Washington, D. C.

Sir:

Herewith please find Post Office money order in the amount of \$30.00 for the payment of final fee covering application for Letters Patent of Rudolph Lensch and Paul Leder, Serial No. 74,028, filed April 13, 1936 and allowed per Official notice on June 4, 1937.

Respectfully,

J. C. MARTIN, JR.

JCMJr-B



[Printer's Note: Lensch Patent No. 2,096,119, appearing here in original File Wrapper, is omitted because it already appears in this printed record at page 56 as Plaintiffs' Exhibit No. 1.]

1936

## CONTENTS

1. Application.....papers.
  2. Prts (3) Apr. 17, 1936
  3. Rejection Jul 20 1936
  4. Amdt A Jan. 21, 1937 (Jan 20 holiday)
  5. Letter & Sub. Oath Jan. 23, 1937
  6. Letter Mar 29 1937
  7. Letter to Dftsmn Apr. 14, 1937
  8. Ex Amdt. Jun 4-1937
- 

[Printer's Note: The 3 drawings appearing here in Original File Wrapper are omitted because they are the same as those in Lensch Patent No. 2,096,119 (Plaintiffs' Exhibit No. 1) set out at pages 56 to 65 of this printed record.]

[Endorsed]: Deft's Exhibit A. Filed 4/30/40.

[Endorsed]: (Reporter's Transcript) Filed Dec. 15, 1941.

[Endorsed]: No. 10,000. United States Circuit Court of Appeals for the Ninth Circuit. Rudolph Lensch and Paul Leder, Appellants, vs. Metallizing Company of America, a corporation, L. E. Kunkler, Charles Boyden and Joseph Gossner, Appellees. Transcript of Record. Upon Appeal from the District Court of the United States for the Southern District of California, Central Division.

Filed December 16, 1941.

PAUL P. O'BRIEN,

Clerk of the United States Circuit Court of Appeals  
for the Ninth Circuit.

---

In the United States Circuit Court of Appeals  
In and for the Ninth Circuit

No. 10000

RUDOLPH LENSCH and PAUL LEDER,  
Appellants,

vs.

METALLIZING COMPANY OF AMERICA, a  
corporation, L. E. KUNKLER, CHARLES  
BOYDEN,

Appellees.

APPELLANTS' CONCISE STATEMENT  
UNDER RULE 19 (6)

I.

The District Court erred in giving judgment for the defendants, dismissing the complaint with prejudice with costs to the defendants.

## II.

The District Court erred in not giving judgment for the plaintiffs as prayed for in the complaint.

## III.

The District Court erred in narrowly construing the claims in suit of the patent and in finding such claims as so construed not to be infringed.

## IV.

The District Court erred in its finding of fact (not numbered) that defendants' gun does not have an "open channel" or the "visibility" to the operator which plaintiffs' patented gun has.

## V.

The District Court erred in its finding of fact (not numbered) that in the Mogul gun during operation only the outer end of the rear wire guide can be seen as it projects out of the body, that from the left hand, the side of the gear wheel attached to the upper feed wheel is visible, but it is hardly possible to see either the feed wheel itself or the moving wire, that it would be impracticable to attempt such an observation during operation, and that the feeding is not visible from the right hand side and it would be impossible to operate the gun and at the same time peer down from the top or front to see the wire passing into the combustion chamber.

VI.

The District Court erred in its finding of fact (not numbered) and its conclusion of law (not numbered) that to construe plaintiffs' patent claims as readable on defendants' device would be to give them a construction which would render the claims invalid on the prior art.

VII.

The District Court erred in its interpretation of the prior art patents and in its application of said prior art in the construction of the claims in suit of the patent.

VIII.

The District Court erred in not construing the claims in suit of the patent as valid when construed sufficiently broad to be infringed by defendants' device.

IX.

The District Court erred in not finding that the plaintiffs' patent in suit, as to the claims relied upon, to wit 2, 3, and 4, is infringed by defendants' device.

Dated: December 13, 1941.

HERBERT A. HUEBNER,

Attorney for Appellants,

520 Title Insurance Building,  
Los Angeles, Calif. MI. 3821.

Received copy of the foregoing Statement of Points under Rule 19 (6) this 15 day of December, 1941.

WILLIAM R. LITZENBERG,  
Attorney for Appellees.

[Endorsed]: Filed Dec. 16, 1941. Paul P. O'Brien, Clerk.

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[Title of Circuit Court of Appeals and Cause.]

APPELLANTS' DESIGNATION OF THE  
PARTS OF THE RECORD TO BE  
PRINTED UNDER RULE 19 (6)

1. Complaint, (as amended in Reporter's Transcript pages 4 to 6).
2. Answer.
3. Decision of the Court (filed June 14, 1941), omitting the illustrations therein.
4. Amended Order (filed June 24, 1941).
5. Findings of Fact and Conclusions of Law.
6. Judgment for Defendants (entered July 9, 1941).
7. Plaintiffs' exhibit 1.
8. The title page and page 16 of plaintiffs' exhibit 10A (omitting all pictures).
9. The title page and page 10 of plaintiffs' exhibit 10B (omitting all pictures).
10. The title page and pages 8, 9 of plaintiffs' exhibit 10C (omitting all pictures).
11. The title page and pages 2, 3 and 4 of plain-



tiffs' exhibit 10D (omitting all pictures and consolidation announcement of title page).

12. Defendants' exhibit A (omitting the patent, which is plaintiffs' exhibit 1).

13. Reporter's Transcript of Testimony, omitting the following:

Page 7, line 5, to page 11, line 22, both inclusive

Page 12, line 15, to page 15, line 13, both inclusive

Page 15, line 20, to page 23, line 20, both inclusive

Page 24, line 8, to page 25, line 13, both inclusive

Page 27, line 3, to page 35, line 10, both inclusive

Page 97, line 2, after "Mr. Litzenberg" to page 104, line 26, both inclusive

Page 105, sentence beginning in line 2, to page 109, line 19, both inclusive

Page 126, line 25, to page 128, line 17, both inclusive

Page 128, line 20, to page 129, line 11, both inclusive

Page 130, line 1, to page 132, line 9, both inclusive

Page 188, line 1, to page 229, line 15, both inclusive

Page 230, line 1, to page 269, line 10, both inclusive

Page 272, line 5, to page 297, line 21, both inclusive

14. Cost Bond on Appeal.
15. Notice of Appeal.
16. Appellants' Concise Statement under Rule 19 (6)
17. This Designation.

Dated: December 13, 1941.

HERBERT A. HUEBNER,  
Attorney for Plaintiffs-Appellants,  
520 Title Insurance Building,  
Los Angeles, California.  
Michigan 3821.

Received copy of the foregoing Appellants' Designation this 15 day of December, 1941.

WILLIAM R. LITZENBERG,  
Attorney for Defendants-Appellees.

[Endorsed]: Filed Dec. 16, 1941. Paul P. O'Brien, Clerk.

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[Title of Circuit Court of Appeals and Cause.]  
APPELLEES' DESIGNATION OF PARTS OF  
THE RECORD TO BE PRINTED UNDER  
RULE 19 (6)

1. The amendment to the Answer (Permitted by the Court)
2. Defendants' documentary Exhibit M (Bulletin 500 and the letter of March 17, 1934, to De Laval Pacific Co.)

3. Additional parts of the Reporter's Transcript of Testimony as follows:

Pages 97 to and including page 104.

Pages 130 to and including page 132.

Pages 188 to 229, all inclusive.

Pages 230 to page 269, inclusive.

Pages 270 to page 272, inclusive.

Pages 273 to 297, inclusive.

4. Plaintiffs' documentary exhibit No. 15 (Bulletin and letter).

WILLIAM R. LITZENBERG,  
Attorney for Defendants-Appellees,  
448 S. Hill St., Los Angeles,  
California.

Dated: Dec. 16, 1941.

Received copy of the foregoing this 16 day of December, 1941.

HERBERT A. HUEBNER  
By HAROLD C. CALDWELL,  
Attorney for Appellants.

[Endorsed]: Filed Dec. 17, 1941. Paul P. O'Brien, Clerk.

[Title of Circuit Court of Appeals and Cause.]

### STIPULATION

It is hereby stipulated by and between the attorneys for the respective parties hereto that six copies of a book of exhibits of the prior art consisting of photostatic copies of foreign patents (Defendants' Exhibits B, C, D, E, and F) and printed copies of United States Letters Patents (Defendants' Exhibits G, H, I, J, K, and L) to be furnished by the United States Patent Office may be used in lieu of printing the same as part of the record on appeal of the above entitled matter.

Dated: Dec. 31, 1941.

HERBERT A. HUEBNER,  
Attorney for Plaintiffs-  
Appellants.

WM. R. LITZENBERG,  
Attorney for Defendants-  
Appellees.

So ordered:

CURTIS D. WILBUR,  
Senior United States Circuit Judge.

[Endorsed]: Filed Jan. 5, 1942. Paul P.  
O'Brien, Clerk.